

1/69

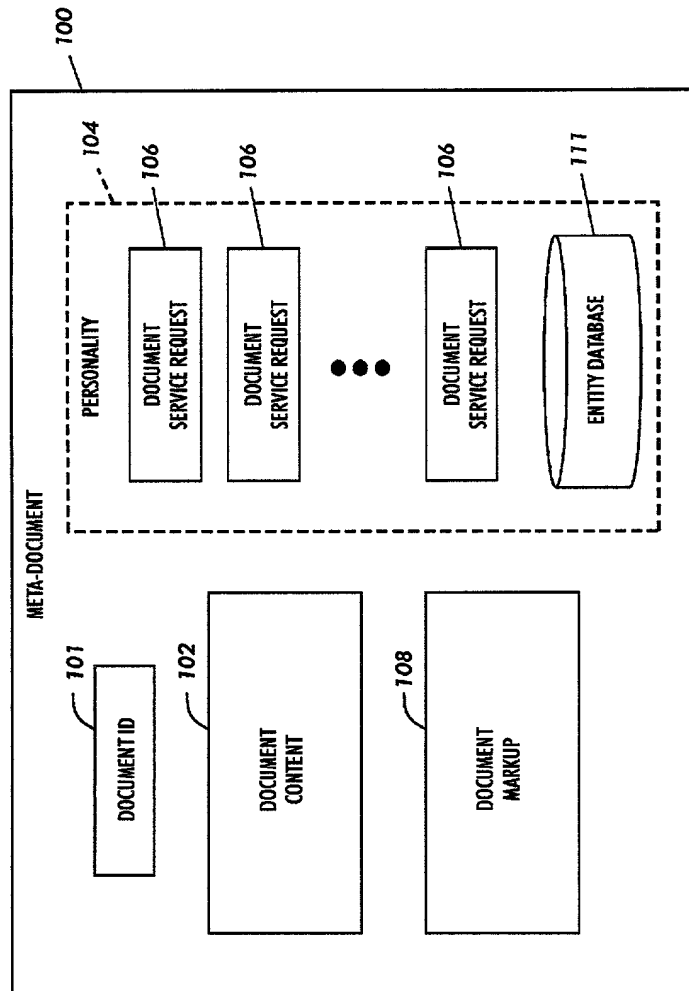


FIG. 1

2/69

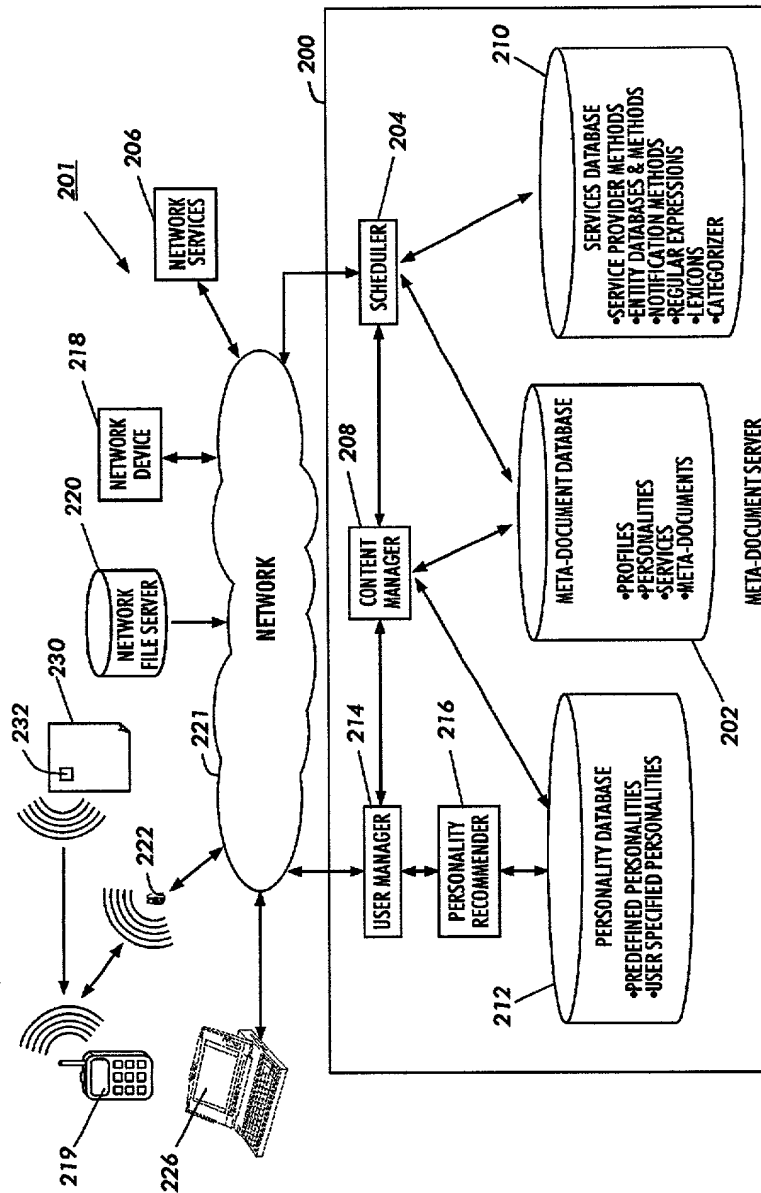


FIG. 2

3/69

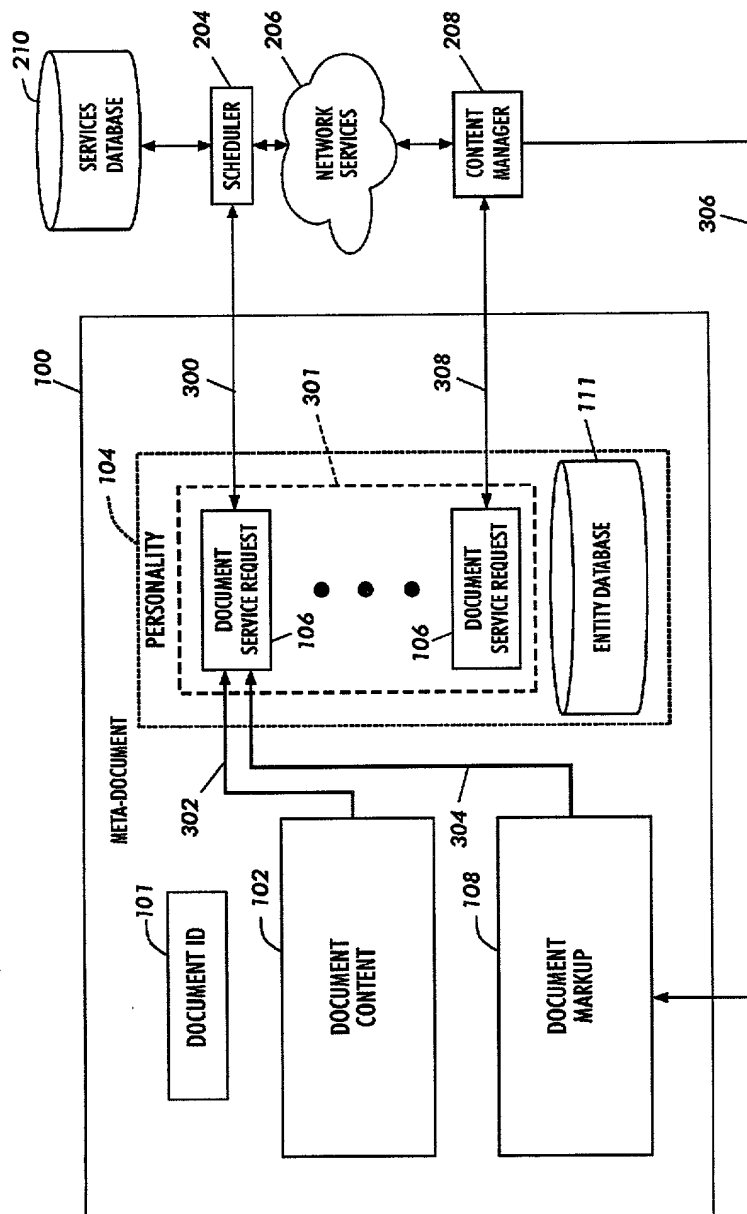


FIG. 3

**FIG. 4**

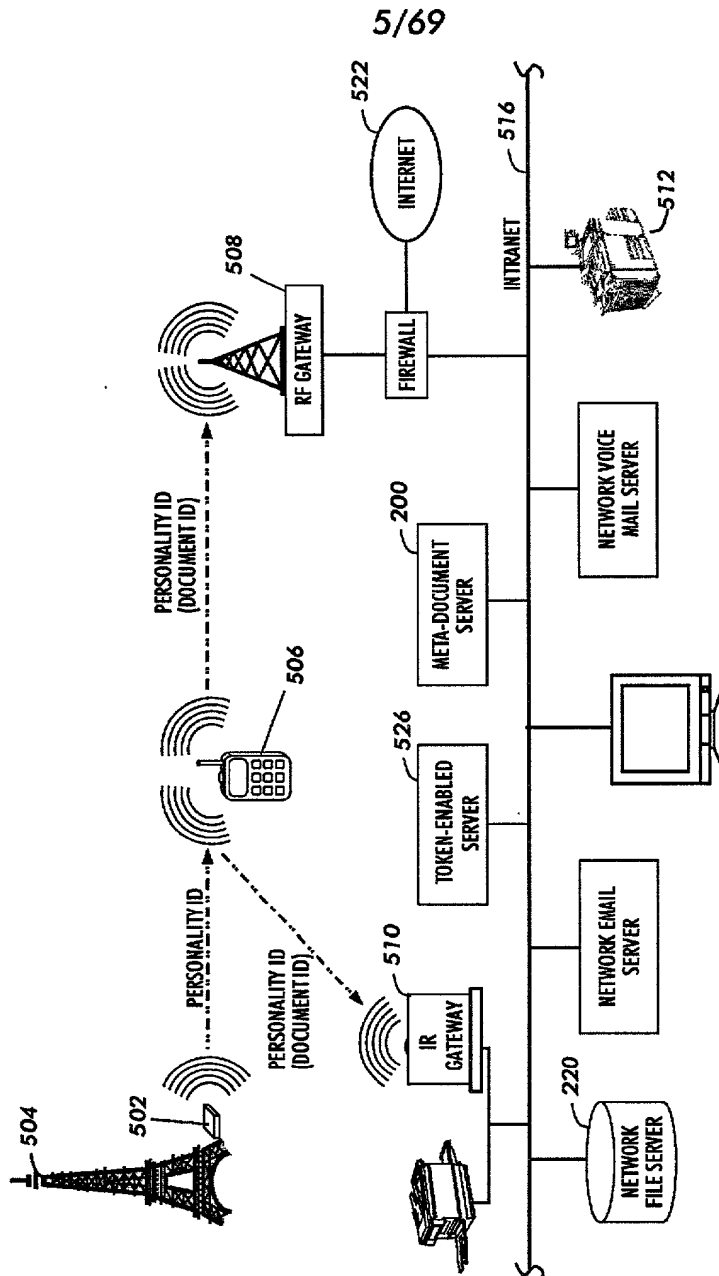


FIG. 5

6/69

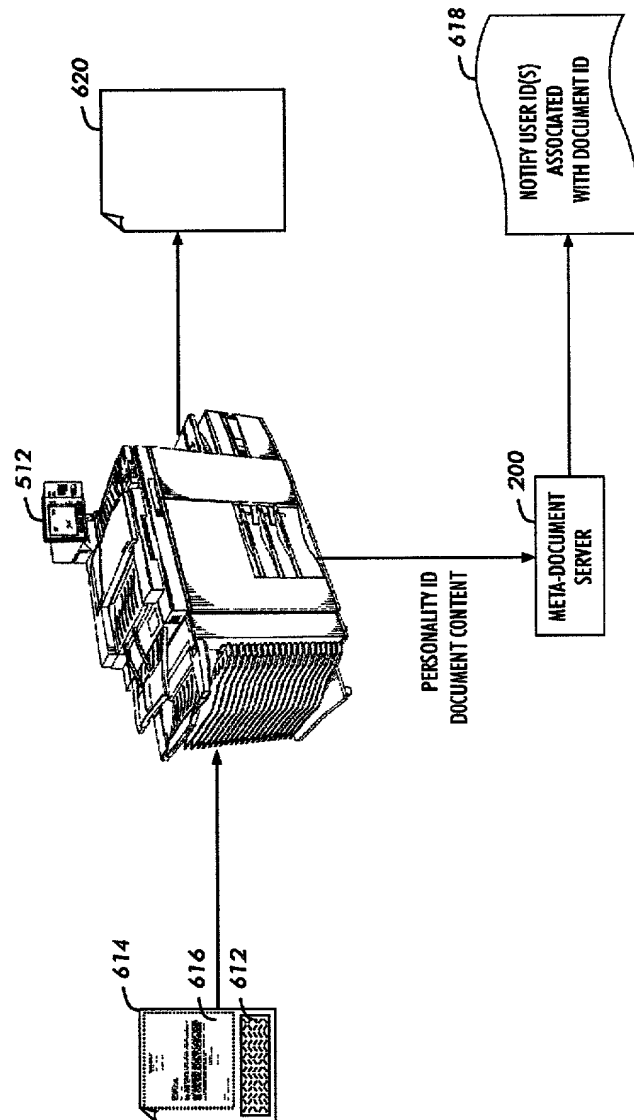


FIG. 6

7/69

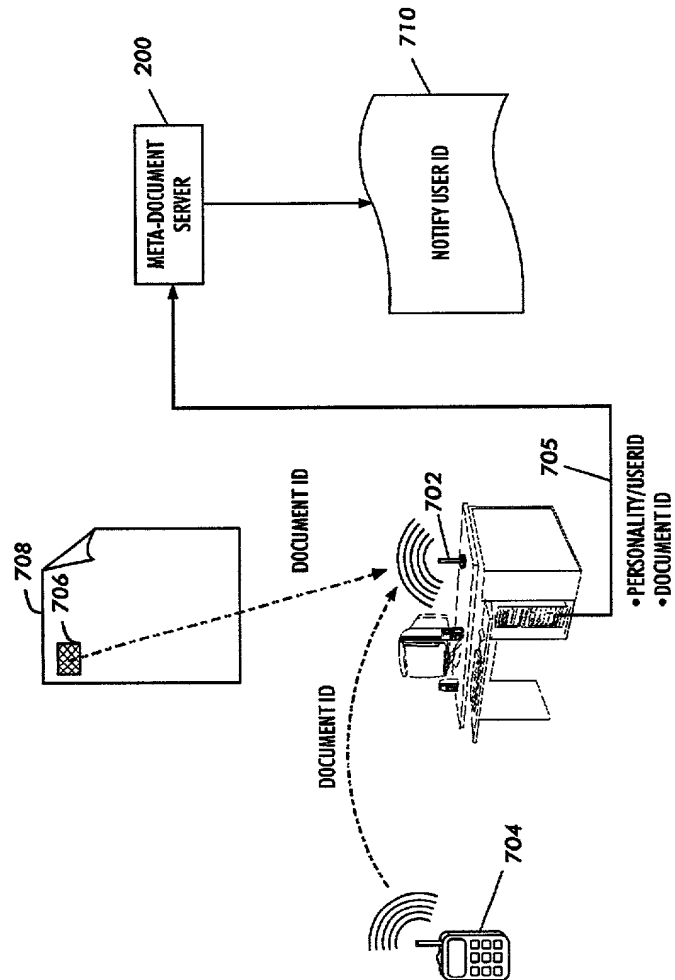


FIG. 7

8/69

**PRINT**

**PRINTER**  
 NAME: \BOUILLANTE\TIMES **PROPERTIES**  
 STATUS: IDLE **814**  
 TYPE: XEROX 4517 POSTSCRIPT LEVEL 2  
 WHERE: TIMES.GRENOBLE.XRCE.XEROX.COM-PASSTHRU ☐ PRINT TO FILE  
 COMMENT: XEROX M2125 B&W DUPLEX - LE CHATEAU - 2ND FLOOR

**PAGE RANGE**  
☒ ALL  
☐ CURRENT PAGE ☐ SELECTION  
☐ PAGES:   
 ENTER PAGE NUMBERS AND/OR PAGE RANGES SEPERATED BY COMMAS, FOR EXAMPLE 1,3,5-12 **804**

**COPIES**  
 NUMBER OF COPIES:   
☒ COLLATE **806**

**ENRICHMENT**  
☒ PERSONALITY: BUSINESS ☐ SELECT A PERSONALITY FOR ME  
**APPLY ENRICHMENT TO:**  
☒ ALL  
☐ CURRENT PAGE ☐ SELECTION  
☐ PAGES:   
**INSERT ENRICHMENT AS:**  
☒ LINKS  
☐ CONTENT **OPTIONS...**

**808** **802** **810**  
 PRINT WHAT: DOCUMENT PAGES PER SHEET: 1 PAGE  
 PRINT: ALL PAGES IN RANGE SCALE TO PAPER SIZE: NO SCALING  
**OPTIONS...** **OK** **CANCEL**

800

FIG. 8

9/69

**PRINT DOCUMENT PROPERTIES**

LAYOUT PAPER/QUALITY **ENRICHMENT**

902 ☒ PERSONALITY: **BUSINESS** ☐ SELECT PERSONALITY FOR ME

**PROVIDE ENRICHMENT BY:**

☒ PRINTING WITH DOCUMENT  
☐ STORING AT SERVER

**INSERT ENRICHMENT AS:**

☒ LINKS  
☐ CONTENT

**WHEN STORING ENRICHMENT AT SERVER:**

☒ EMAIL ME WHEN COMPLETED  
ADDRESS:   
☐ DO NOT NOTIFY ME

**CAPTURE POINT:** 908

☒ AT WORKSTATION  
☐ AT PRINT SERVER

ADVANCED

OK CANCEL

900 901 906 904

FIG. 9



**FIG. 10**

11/69

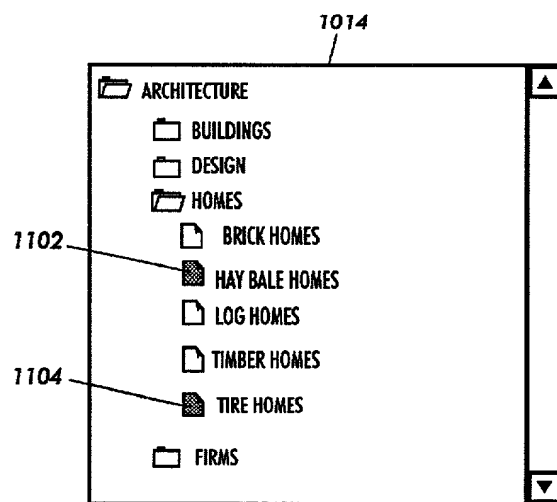


FIG. 11

12/69

PROPERTIES FOR USER JSMITH

LAYOUT SHARING PERSONALITIES

1212 DEFAULT: ANALYST 1214 RECOMMEND PERSONALITY FOR ME

1230 PROPAGATE ENRICHMENT BETWEEN DOCUMENTS:

1205 NO 1204 YES

1220 INSERT ENRICHMENT AS:

1222 LINKS 1224 CONTENT 1226 AUTOMATICALLY DETERMINE TO LINK OR INSERT CONTENT

1204 WHEN DOCUMENT ENRICHED NOTIFY ME BY:

1205 VOICE MESSAGE 1206 EMAIL 1207 SMS TEXT MESSAGE

1240 ORGANIZE MY PERSONALITIES 1216 CREATE/MODIFY MY PERSONALITIES

1242 AUTOMATICALLY COMPLETE CITATIONS:

1242 NO YES, DEPTH: 4

OK CANCEL

FIG. 12

13/69

1310 ☐ CREATE/MODIFY A GROUP OF EXISTING PERSONALITIES

1312

1314

1316

Name	Creation Date
Technology Watch in Computer Sciences	2001-03-16 14:08:06
Watch Business	2001-03-16 14:08:08
Watch Legal	2001-03-16 14:08:10
Watch Intellectual Property	2001-03-16 14:08:10
Scientific Watch in Medicine	2001-03-16 14:08:10

1318

Click on this icon to view all available service categories

Search Engine

- luckygoogle People Google Lucky Result

Stock Quotes

- bloomberg Stock Quotes

OK CANCEL

FIG. 13

14/69

1378	1400	1426	1412	1414	1430	1442	1440	1444	1450
SEARCH ENGINE	NAME	ENTITY TYPE	ANNOTATE	DEPTH	PROVIDER	COST	QUERY	REFRESH	
<input checked="" type="checkbox"/> 1404	COMPUTING	COMPUTING	ALWAYS	0	YAHOO	FREE	LINK	DAILY	1452
<input type="checkbox"/> 1422	BIOLOGY	BIOLOGY	ALWAYS	0	GOOGLELUCKY	NULL	LINK	NEVER	1451
<input type="checkbox"/> 1420	MEDICINE	MEDICINE	ALWAYS	0	ALTAVISTA	FEE	LINK	AUTO	1455
<input type="checkbox"/> 1408	APPLY PAIRS OF ENTITIES AND IDENTIFY 3RD PARTY ENTITIES	COMPANIES	EXPERT	0	GOOGLELUCKY	NULL	CONTENT	NULL	1453
	APPLY PAIRS OF ENTITIES USING GOOGLELUCKY	PRODUCTS	ALWAYS	2	NORTHERNLIGHTS	NULL	LINK	WEEKLY	1456
	COUNTRIES	COUNTRIES	NOVICE	0	GOOGLELUCKY	FEE	CONTENT	UNTIL 2003	1454
	ASTRONOMY	ASTRONOMY	ALWAYS	1	GOOGLE	NULL	LINK	MONTHLY	
	PEOPLE	PEOPLE	ALWAYS	3	GOOGLEPEOPLE	NULL	LINK	NULL	

VIEW HIERARCHY  
SET DEPTH 1432

1424

FIG. 14

15/69

1502

The screenshot shows a software window titled "CREATE/MODIFY MY PERSONALITIES" with a standard Windows-style title bar containing a question mark and a close button. The window contains the following elements:

- A "NAME:" label followed by a "BROWSE" button and a text input field (labeled 1504).
- A radio button (labeled 1506) next to the text "CREATE/MODIFY A GROUP OF EXISTING PERSONALITIES".
- A radio button (labeled 1508) next to the text "USE SELECTED DOCUMENTS AND/OR FOLDERS TO CREATE A NEW PERSONALITY". Below this text is a "BROWSE" button and a text input field (labeled 1509).
- A radio button (labeled 1510) next to the text "USE SELECTED FILE/WEBSITE TO CREATE A NEW PERSONALITY". Below this text is a "BROWSE" button and a text input field (labeled 1511).
- A radio button (labeled 1520) next to the text "CREATE QUESTION FORM USING PERSONALITY LEXICONS". Below this text is a "QUESTION:" label and a text input field (labeled 1521).
- A "Hint:" label followed by a text input field (labeled 1514).
- A "KNOWLEDGE LEVEL:" label followed by two radio buttons: "NOVICE" (labeled 1516) and "EXPERT".
- At the bottom right, "OK" and "CANCEL" buttons (labeled 1512).

FIG. 15

16/69

1600

CREATE/MODIFY A GROUP OF EXISTING PERSONALITIES

NAME: TECHNOLOGY WATCH IN ORGANIC CHEMISTRY

OPERATION:

☒ MERGE 1602

☐ SUBTRACT 1604

PERSONALITY A ▼

WITH/FROM

PERSONALITY B ▼

OK CANCEL

FIG. 16

17/69

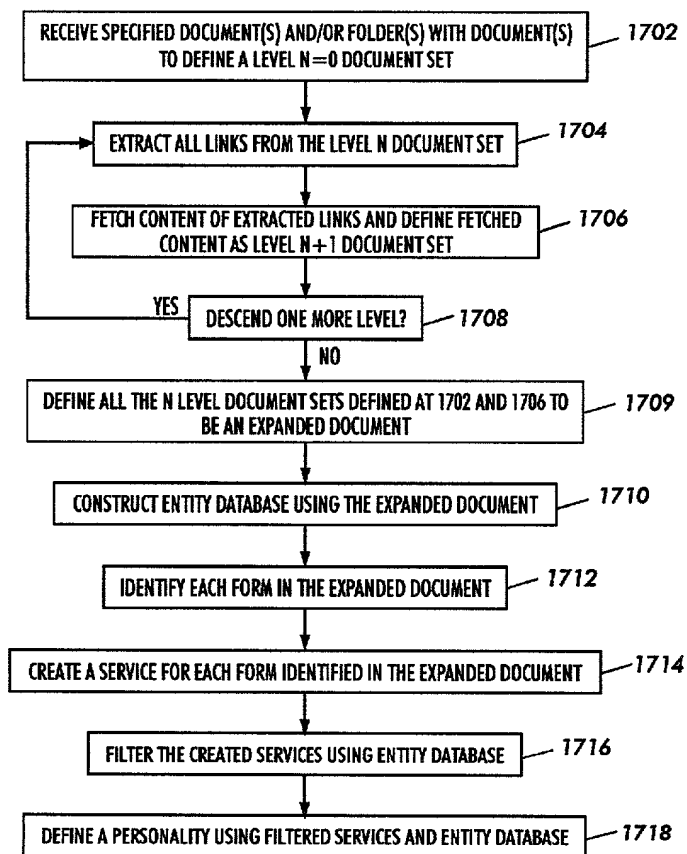


FIG. 17

18/69

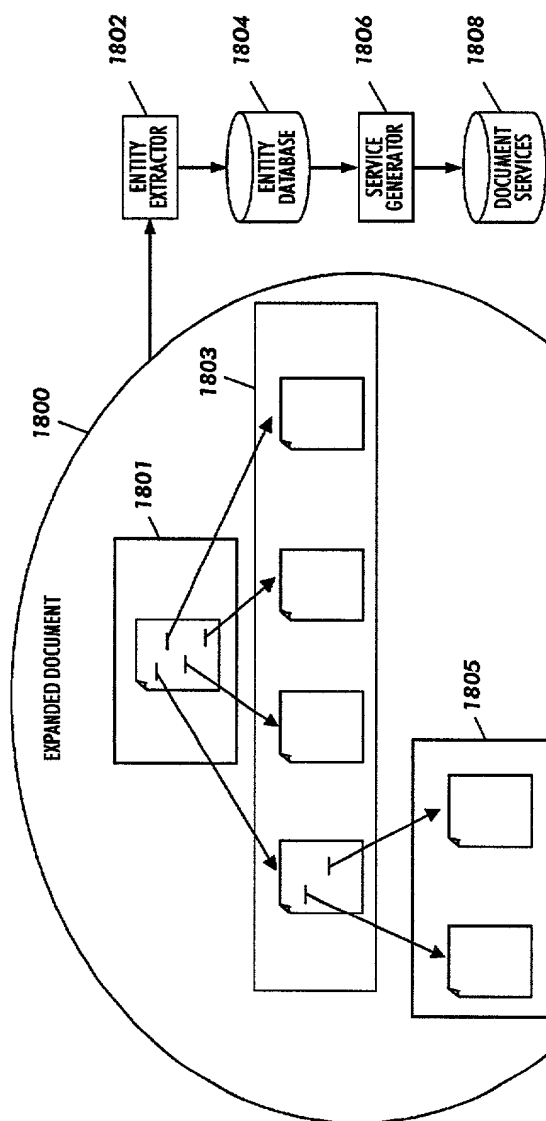


FIG. 18

19/69

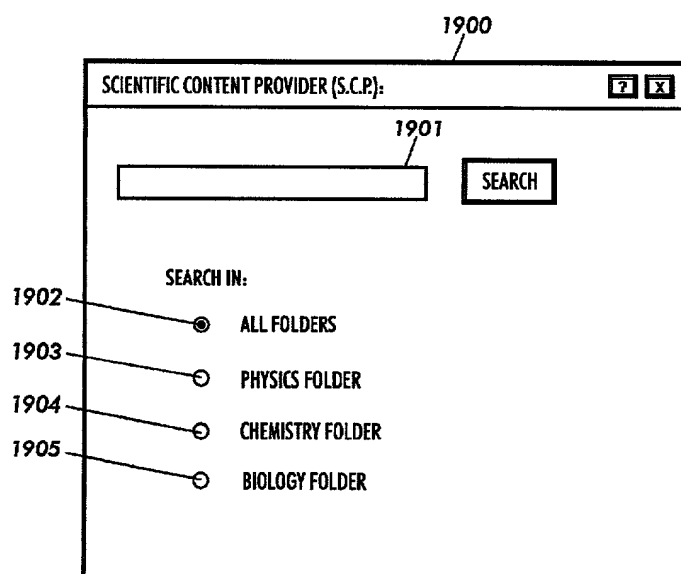


FIG. 19

20/69

SCIENTIFIC SEARCH <input type="checkbox"/> <input type="checkbox"/>									
SEL	NAME	ENTITY TYPE	ANNOTATE	DEPTH	PROVIDER	COST	QUERY	REFRESH	
<input checked="" type="checkbox"/>	ALL FOLDERS RESULT OF SCIENTIFIC CONTENT PROVIDER	STANDARD	ALWAYS	0	S.C.P.	FREE	CONTENT	NULL	
<input type="checkbox"/>	PHYSICS RESULT OF SCIENTIFIC CONTENT PROVIDER	PHYSICS	ALWAYS	0	S.C.P.	FREE	CONTENT	NULL	
<input type="checkbox"/>	CHEMISTRY RESULT OF SCIENTIFIC CONTENT PROVIDER	CHEMISTRY	ALWAYS	0	S.C.P.	FREE	CONTENT	NULL	
<input type="checkbox"/>	BIOLOGY RESULT OF SCIENTIFIC CONTENT PROVIDER	BIOLOGY	ALWAYS	0	S.C.P.	FREE	CONTENT	NULL	

FIG. 20

21/69

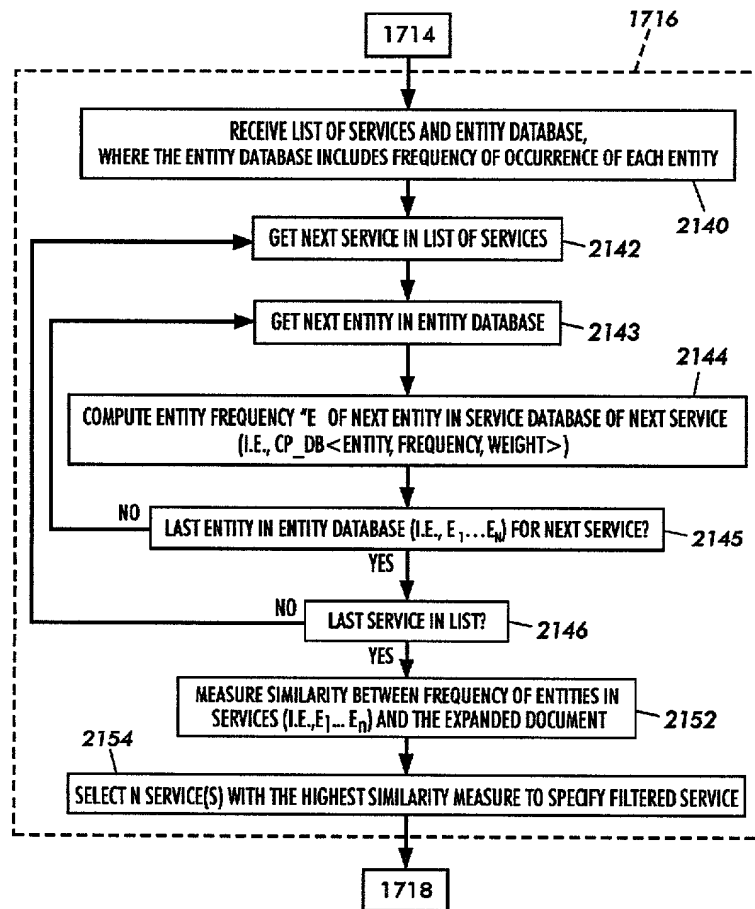


FIG. 21

22/69

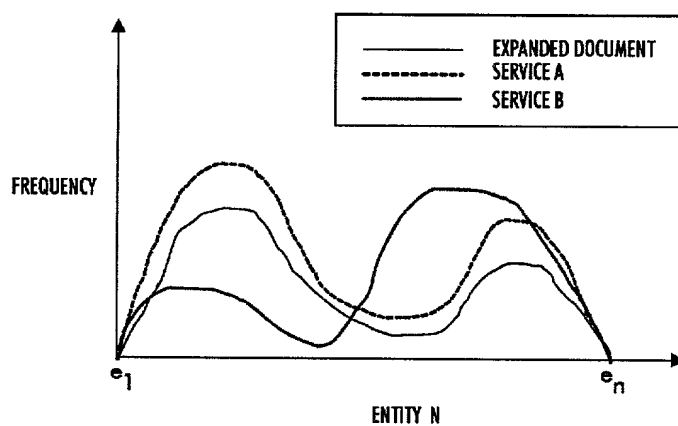


FIG. 22

23/69

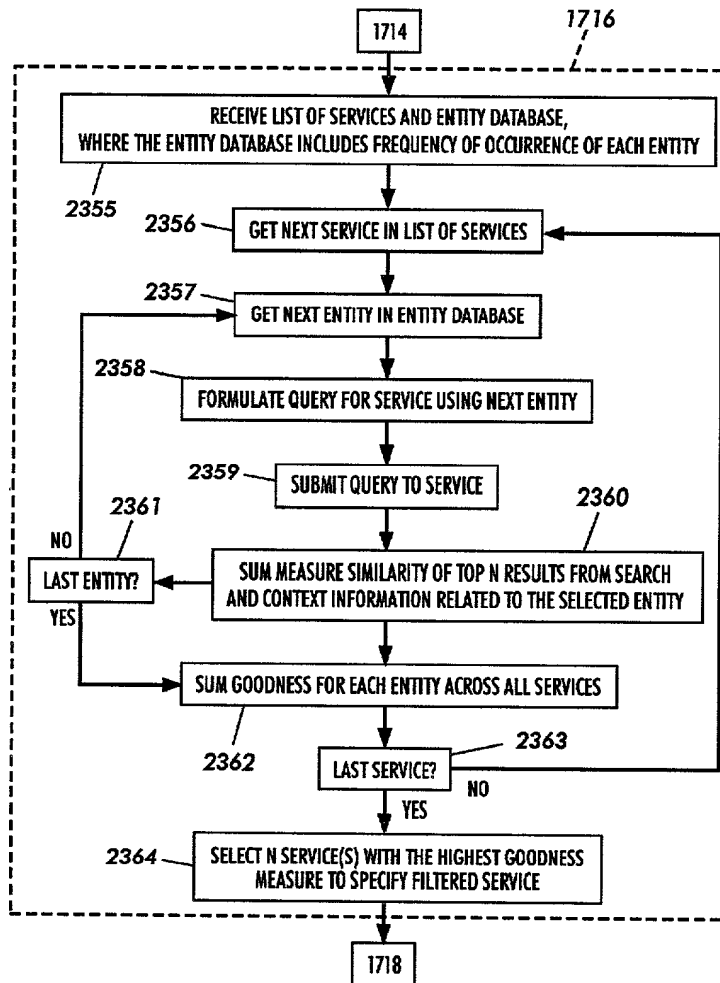


FIG. 23

24/69

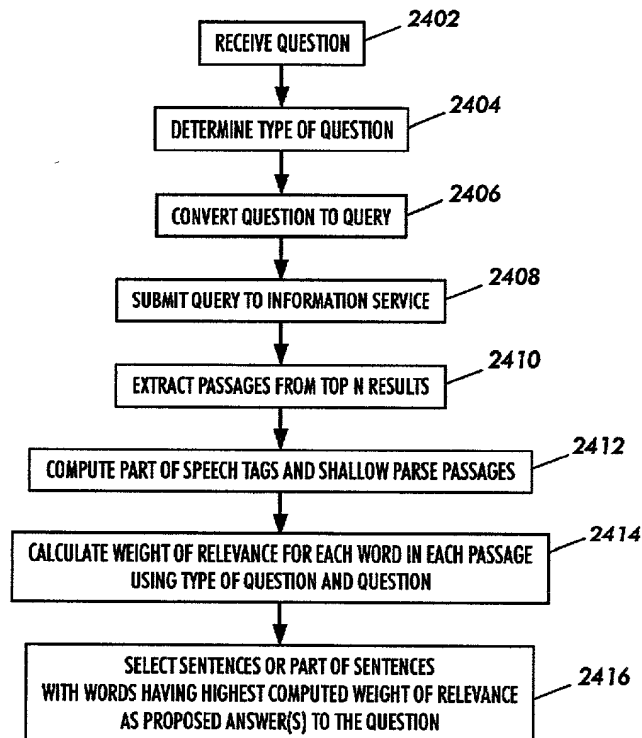


FIG. 24

25/69

2502

E-LEARNING SERVICES ASSOCIATED WITH E-LEARNING PERSONALITY	
SEL	
<input checked="" type="checkbox"/>	LINK WORDS OR MULTWORD EXPRESSIONS FOUND IN THE DOCUMENT TO THEIR DEFINITIONS
<input type="checkbox"/>	LINK WORDS OR MULTWORD EXPRESSIONS FOUND IN THE DOCUMENT TO THEIR TRANSLATIONS
<input type="checkbox"/>	LINK EACH TEXT UNIT (I.E., DOCUMENT, PARAGRAPH, PHRASE, WORD) TO A TUTORIAL CONCERNING EACH TEXT UNIT
<input type="checkbox"/>	LINK EACH TEXT UNIT (I.E., DOCUMENT, PARAGRAPH, PHRASE, WORD) TO AN EXPERT CONCERNING IDENTIFIED SUBJECTS
<input type="checkbox"/>	LINK EACH TEXT UNIT (I.E., DOCUMENT, PARAGRAPH, PHRASE, WORD) TO AN INTERACTIVE COURSE ABOUT IDENTIFIED SUBJECTS
<input checked="" type="checkbox"/>	LINK EACH TEXT UNIT (I.E., DOCUMENT, PARAGRAPH, PHRASE, WORD) TO A LIST OF REAL WORLD CLASSES ABOUT IDENTIFIED SUBJECTS
<input checked="" type="checkbox"/>	LINK TEXT UNITS TO (I.E., DOCUMENT, PARAGRAPH, PHRASE, WORD) LEARNING RESOURCES CONCERNING EACH TEXT UNITS

FIG. 25

26/69

2602

LANGUAGE LEARNING SERVICES ASSOCIATED WITH LANGUAGE LEARNING PERSONALITY	
2604	SEL <input checked="" type="checkbox"/>
2606	<input checked="" type="checkbox"/> LINK WORDS OR MULTWORD EXPRESSIONS FOUND IN THE DOCUMENT TO THEIR DEFINITIONS
2608	<input type="checkbox"/> LINK WORDS OR MULTWORD EXPRESSIONS FOUND IN THE DOCUMENT TO THEIR TRANSLATIONS
2610	<input type="checkbox"/> LINK EACH SENTENCE, OR PHRASE, TO A GRAMMATICAL DESCRIPTION OF THE STRUCTURE OF THE SENTENCE OR PHRASE
2612	<input type="checkbox"/> LINK EACH WORD, MULTWORD EXPRESSION, PHRASE OR SENTENCE TO OTHER INSTANCES OF THE SAME IN DIFFERENT CONTEXTS FROM THE PRESENT
2614	<input type="checkbox"/> LINK EACH WORD, MULTWORD EXPRESSION, PHRASE OR SENTENCE TO ONE OR MORE INTERACTIVE GRAMMAR EXERCISES CONCERNING THAT ELEMENT
2616	<input checked="" type="checkbox"/> LINK EACH TEXT UNIT (I.E., DOCUMENT, PARAGRAPH, PHRASE, WORD) TO A LIST OF REAL WORLD CLASSES ABOUT IDENTIFIED LANGUAGE
	<input checked="" type="checkbox"/> LINK TEXT UNITS TO (I.E., DOCUMENT, PARAGRAPH, PHRASE, WORD) LANGUAGE LEARNING RESOURCES CONCERNING EACH TEXT UNITS

FIG. 26

27/69

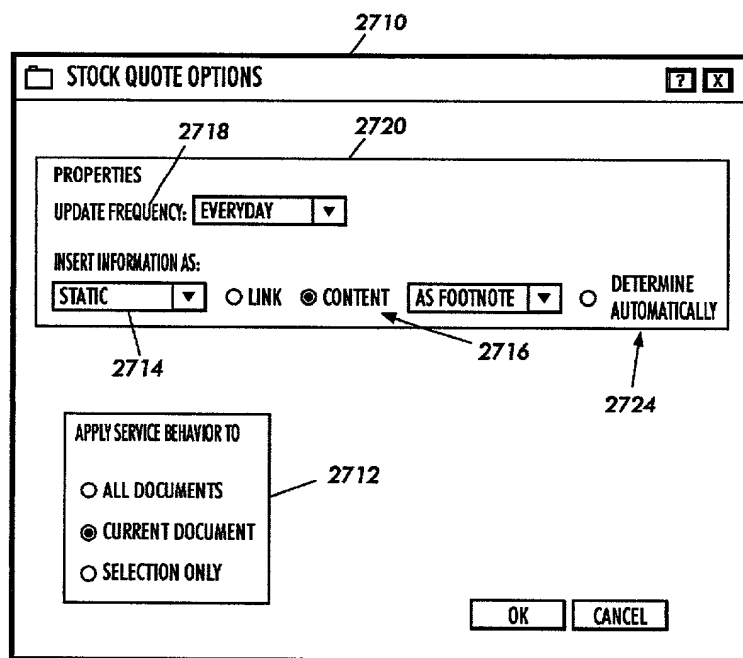


FIG. 27

28/69

2800

☐ ANNOTATE PROPERTY

ANNOTATE ENTITIES WHEN:

2802 ☐ ALWAYS

2804 ☒ EXPERT MODE:

2806 ☐ NOVICE MODE:

2808 CHANGE REFERENCE

2801

2805

2803

2807

2810

2811

ANNOTATE ONLY THOSE ENTITIES THAT OCCUR WITH A FREQUENCY LESS THAN: 4 IN THE REFERENCE DOCUMENT(S) AND/OR DATABASE(S) AT WWW.XRCE.XEROX.COM/DB/EXPERT.

AND

ANNOTATE ONLY THOSE ENTITIES THAT OCCUR WITH A FREQUENCY GREATER THAN: 20 IN THE REFERENCE DOCUMENT(S) AND/OR DATABASE(S) AT WWW.XRCE.XEROX.COM/DB/NOVICE.

AND

ANNOTATE ENTITY WHEN IT APPEARS IN DOCUMENT CONTENT WITH A FREQUENCY GREATER THAN: 4.

OK CANCEL

FIG. 28

29/69

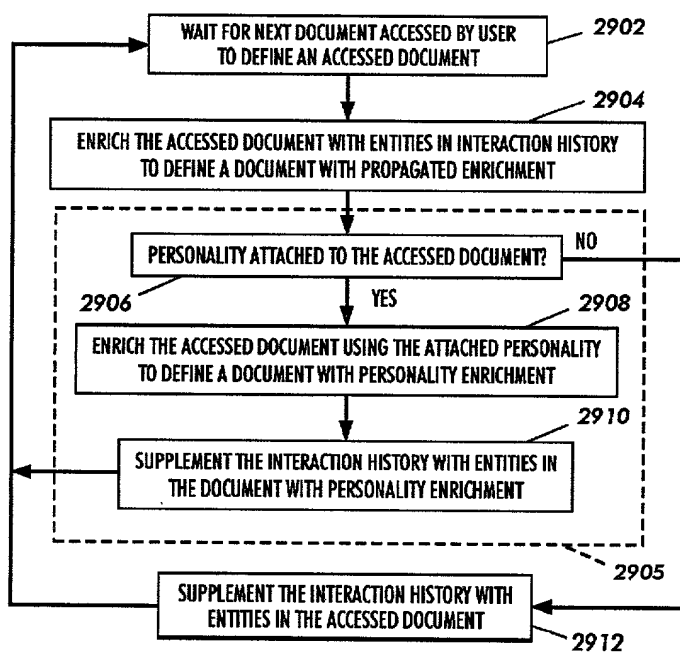


FIG. 29

30/69

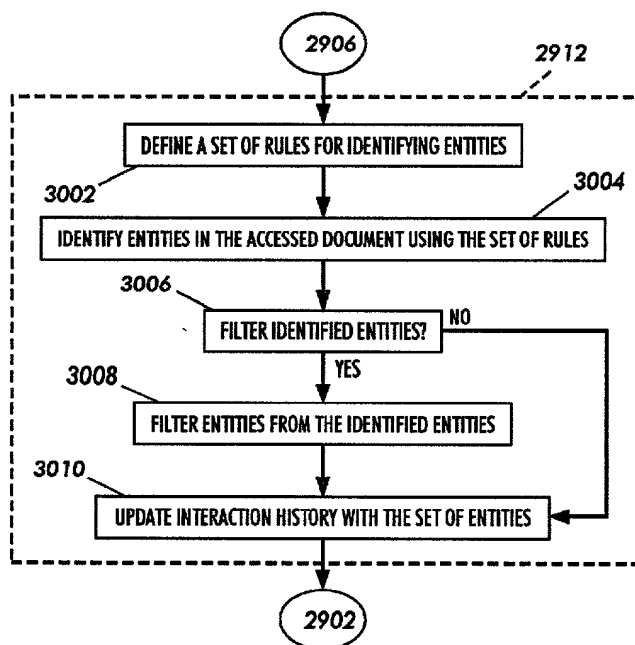


FIG. 30

31/69

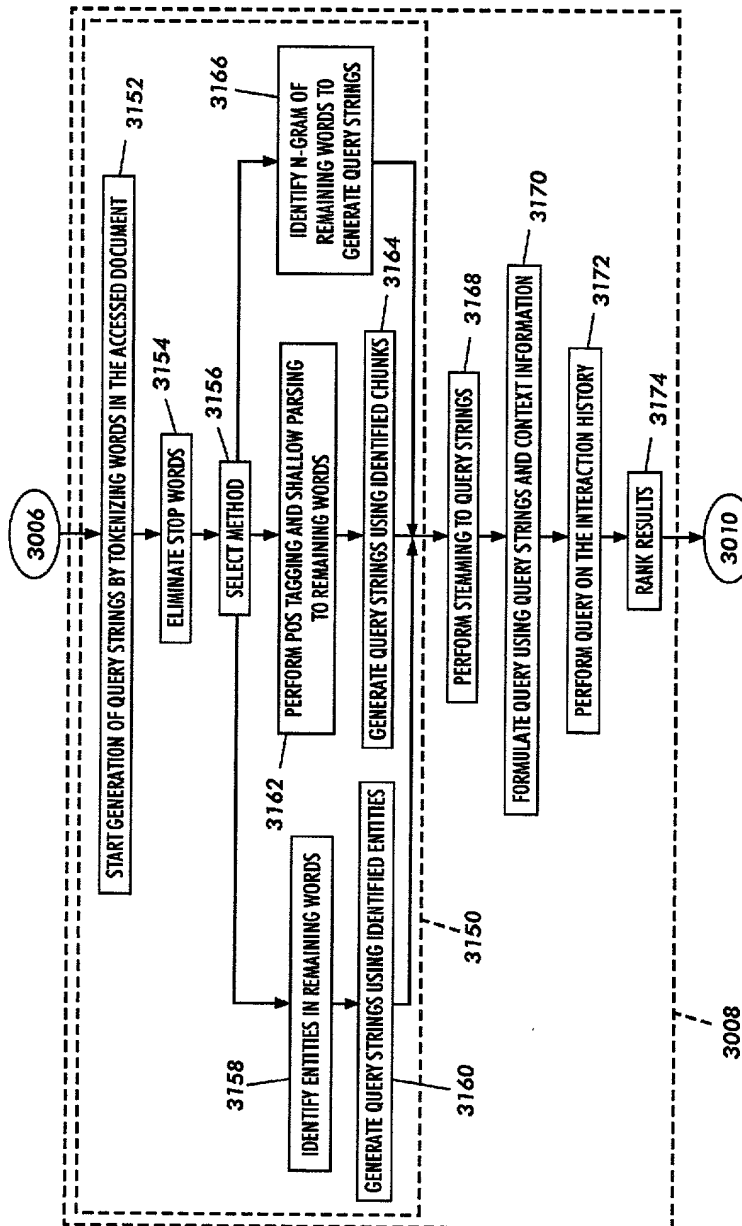


FIG. 31

32/69

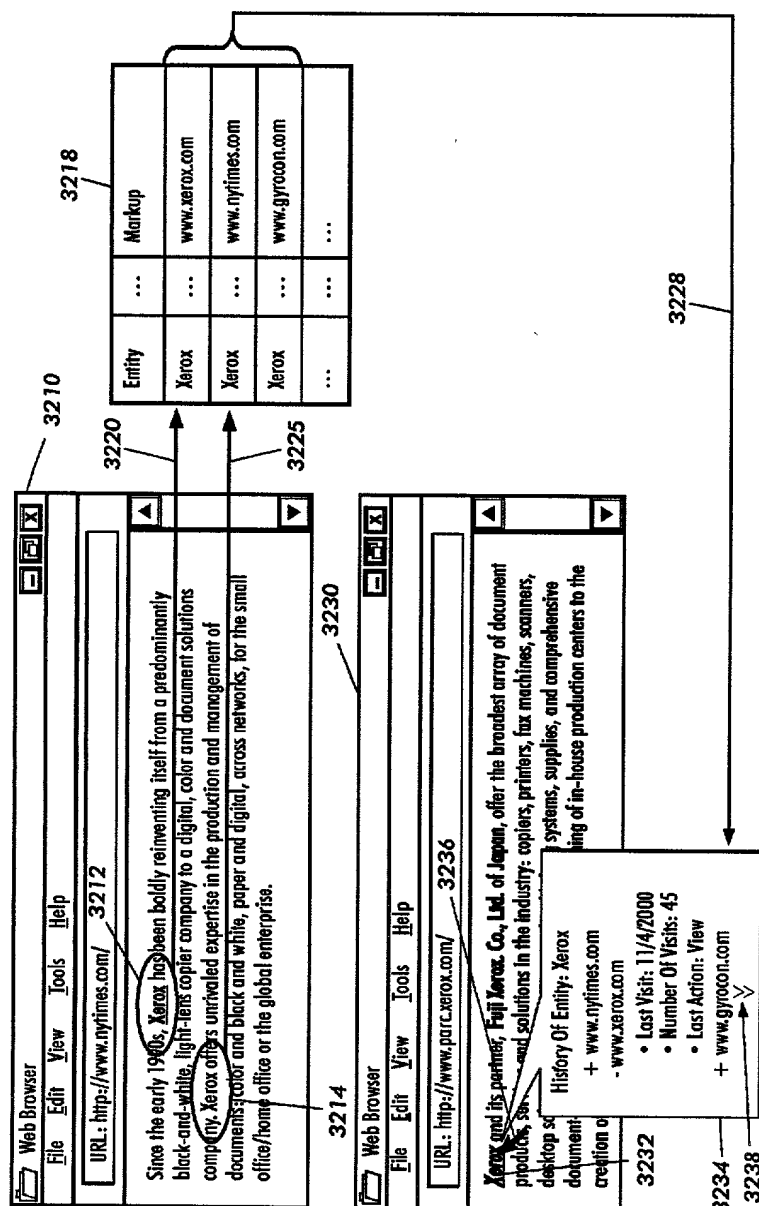


FIG. 32

33/69

3218

ENTITY	ENTITY TYPE	VISITS	LAST VISIT	ACTION LIST	DWOZ CATEGORY	LOCATION	POS	MARKUP
XEROX	BUSINESS	45	11/4/2000	VIEW (43), PRINT(2)	BUSINESS	40	NOUN	WWW.XEROX.COM
XEROX	BUSINESS	1	5/1/2001	VIEW(1)	FINANCE	689	NOUN	WWW.NYTIMES.COM
XEROX	BUSINESS	4	2/22/2001	EMAIL(1), VIEW(3)	COMPUTER	343	NOUN	WWW.GYROCON.COM
...	...	...	...	...	...	...	...	...

FIG. 33

34/69

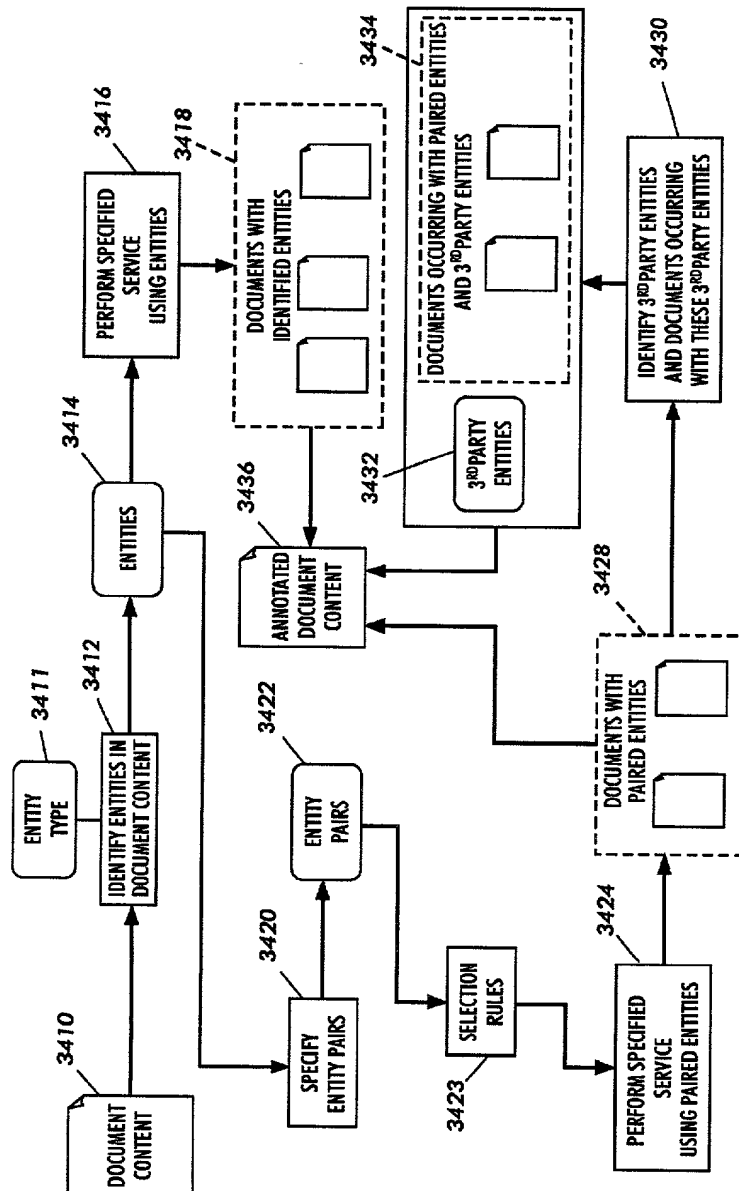


FIG. 34

35/69

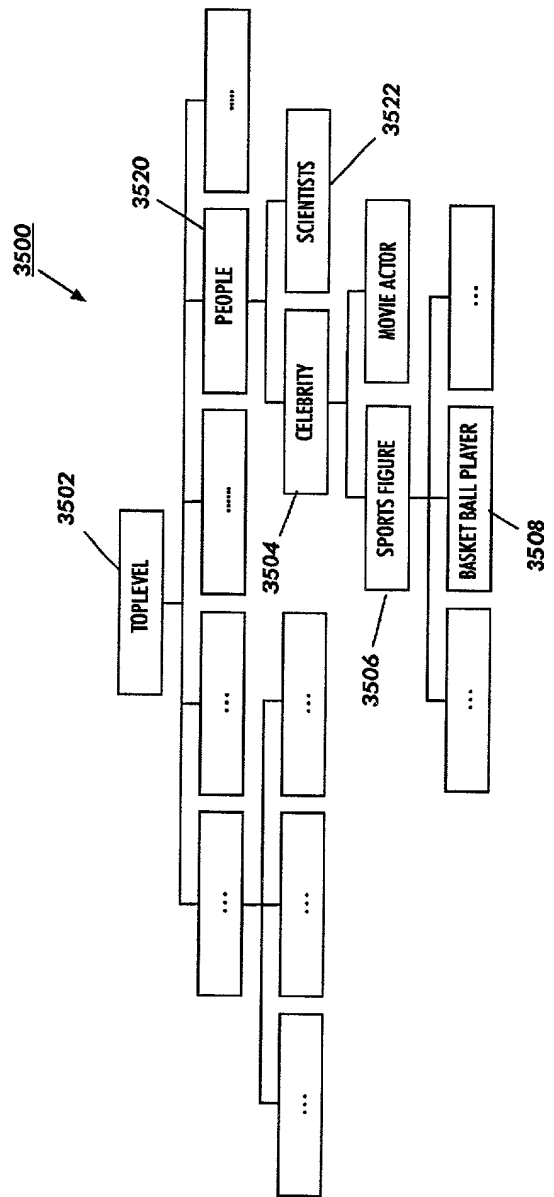


FIG. 35

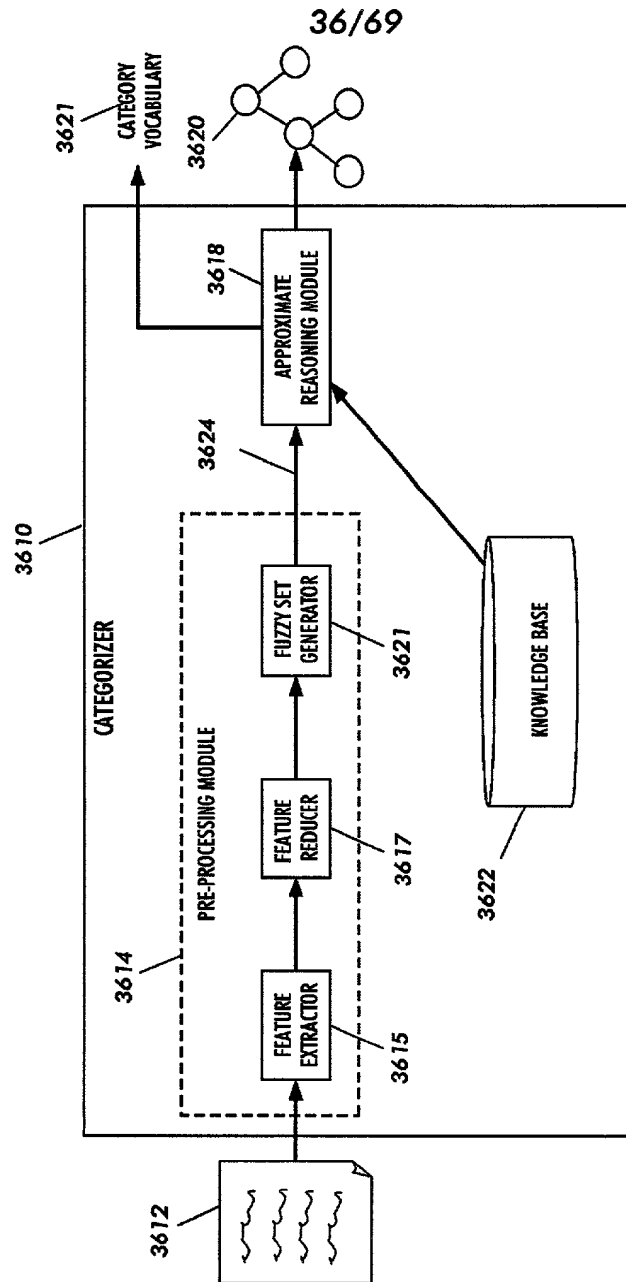
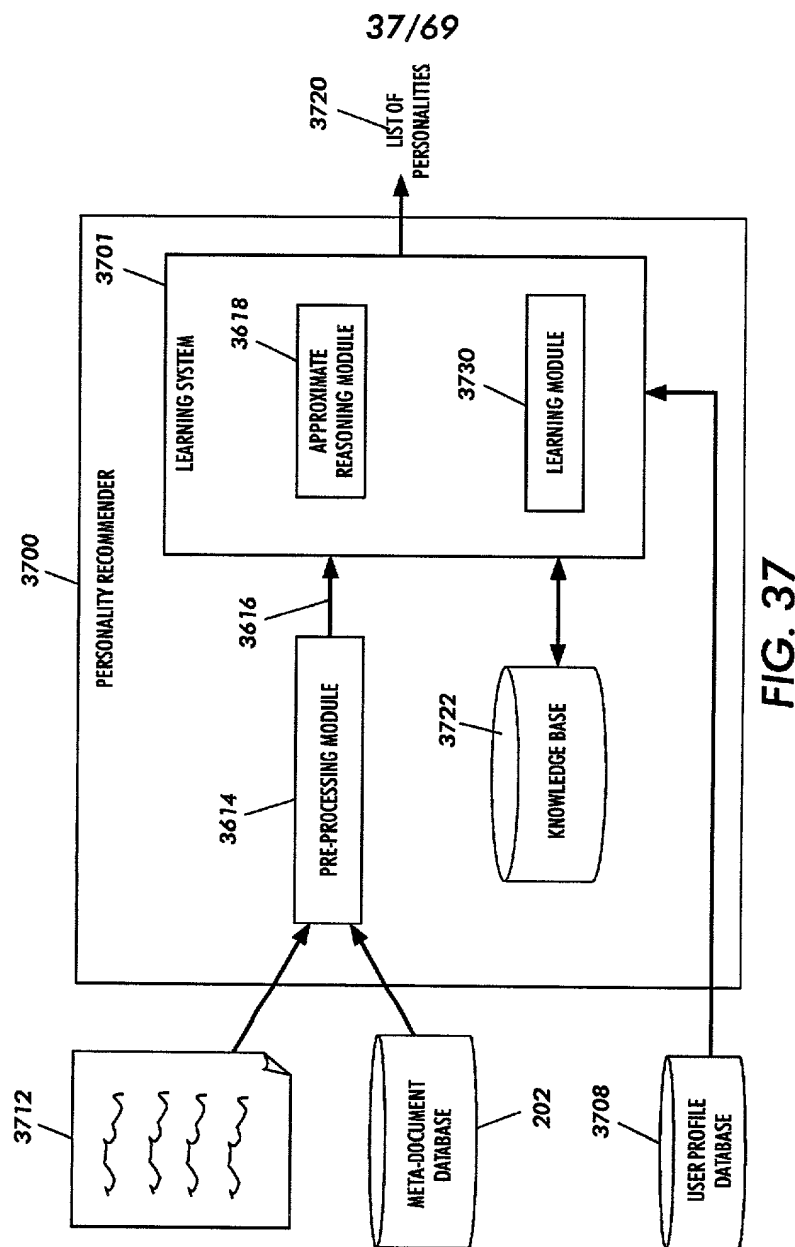


FIG. 36



38/69

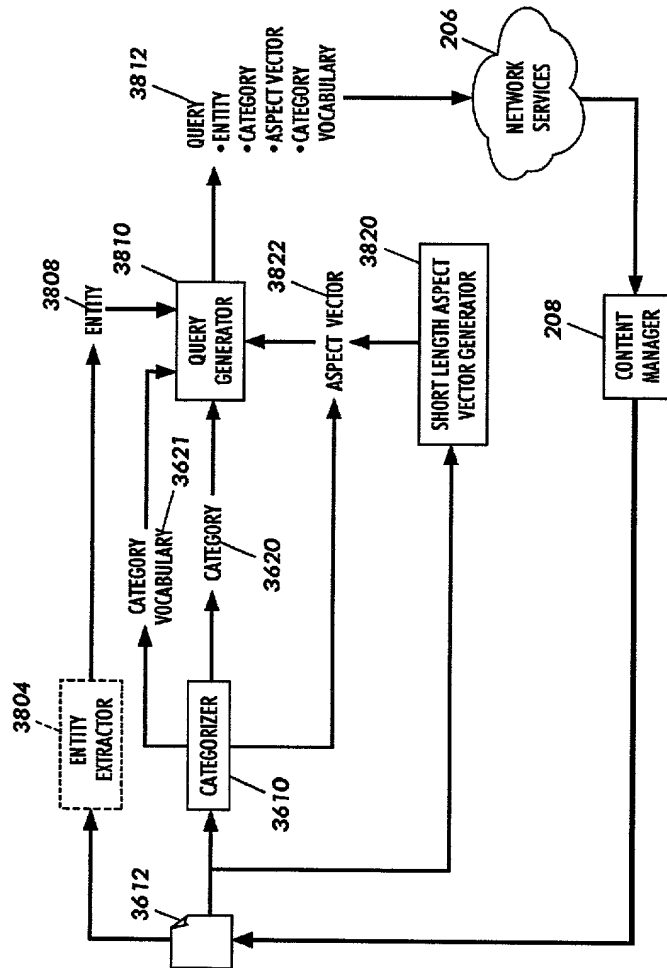


FIG. 38

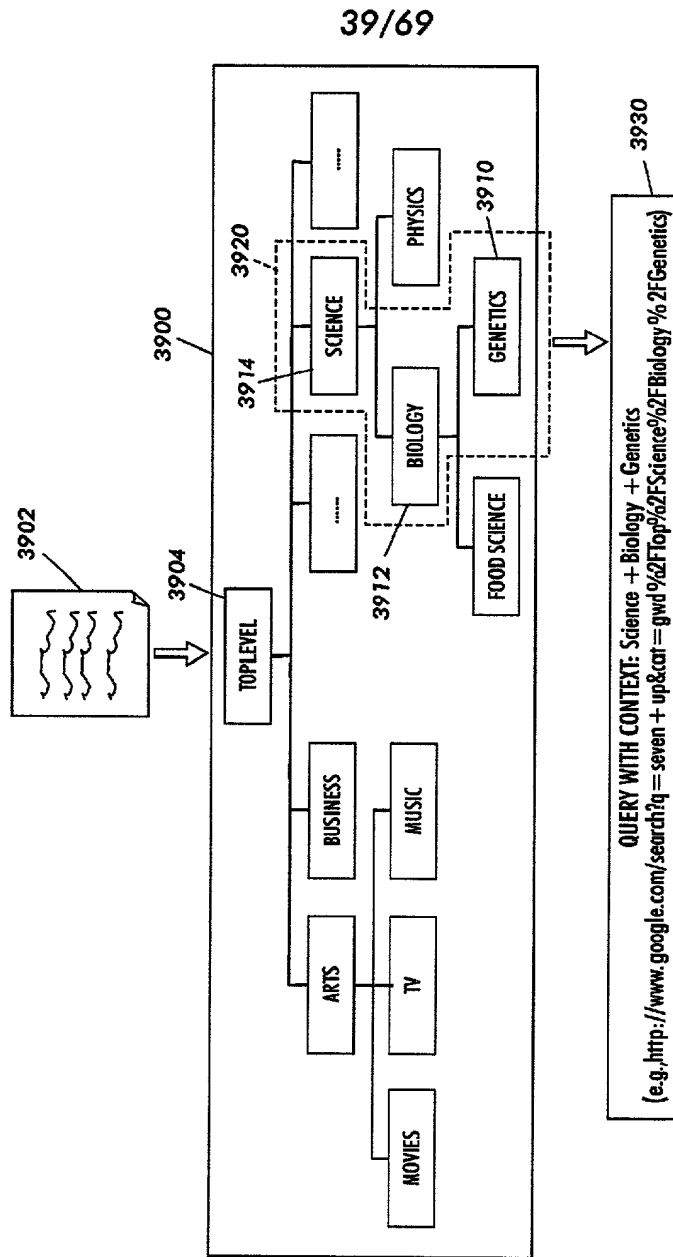


FIG. 39

40/69

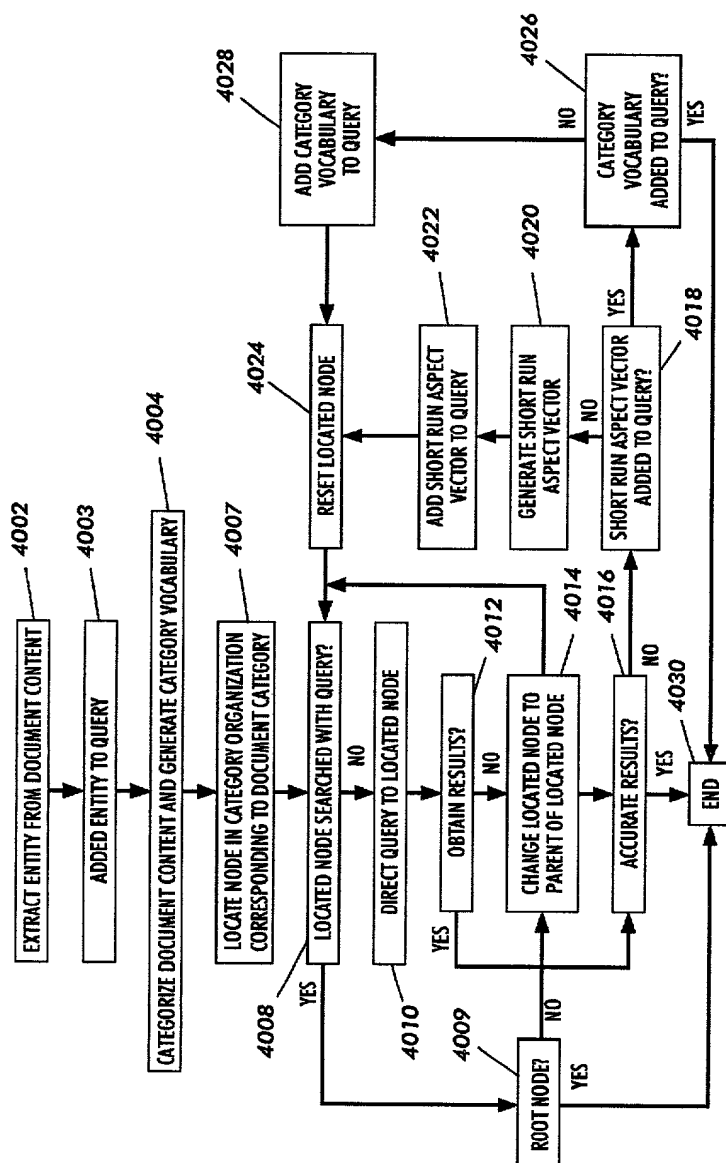


FIG. 40

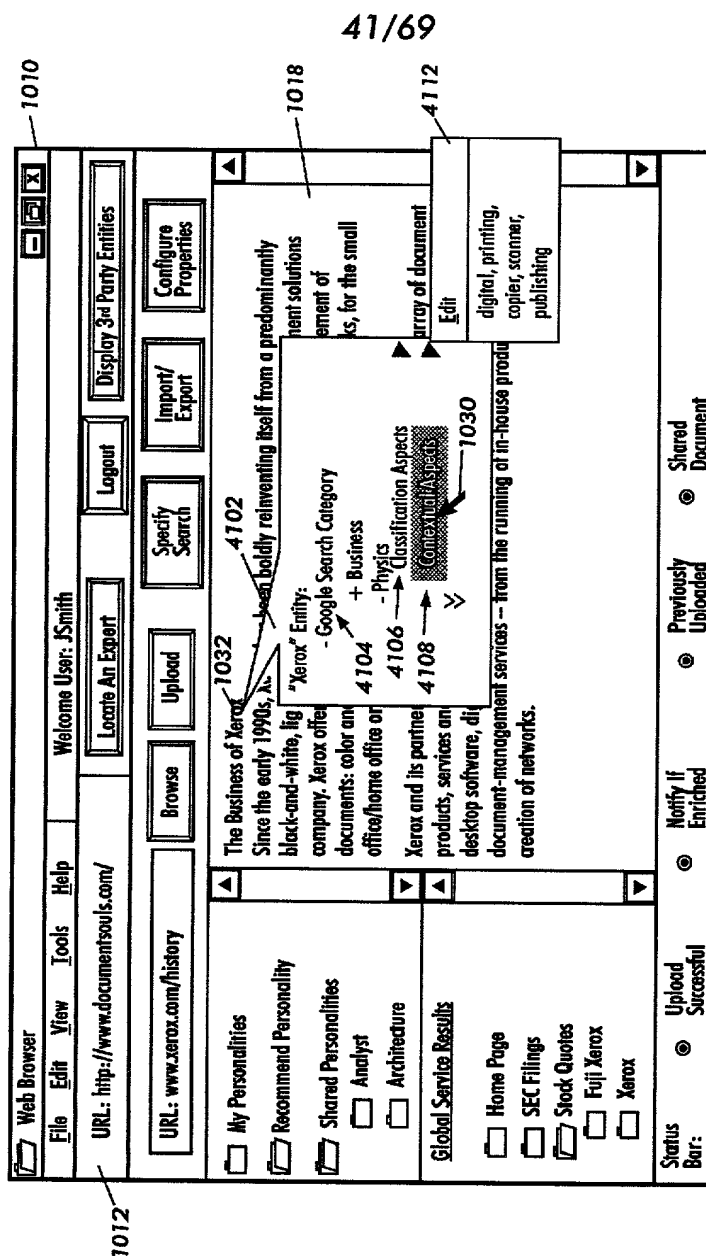
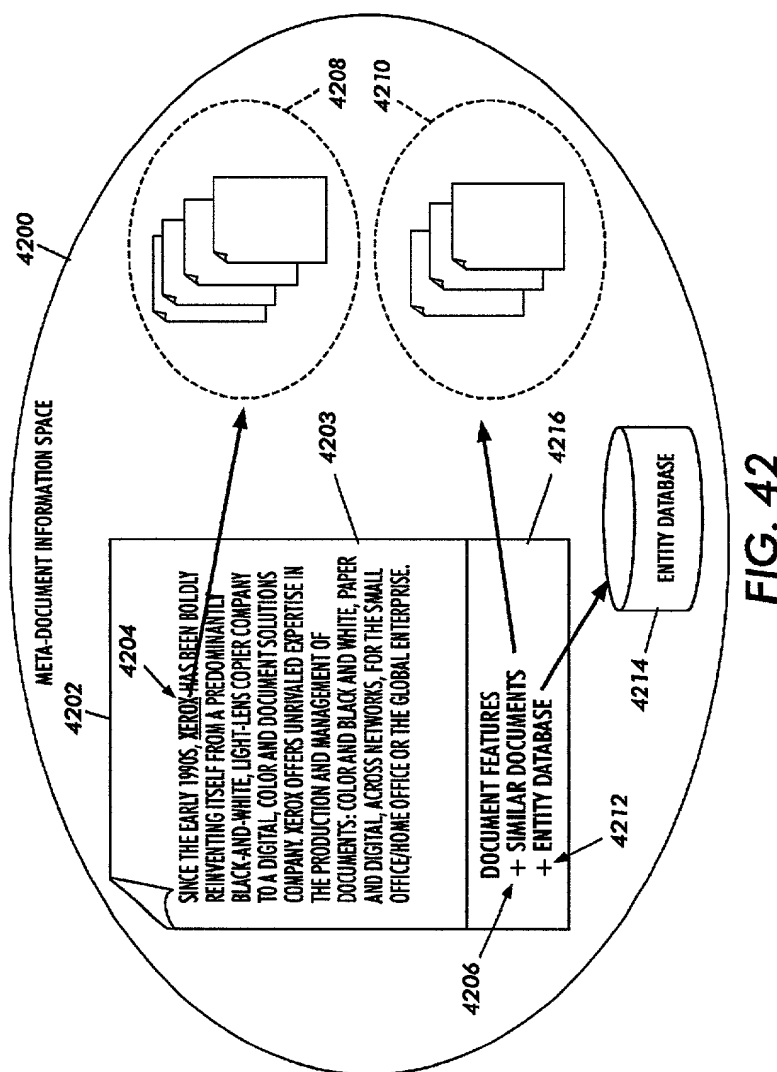


FIG. 41

42/69



43/69

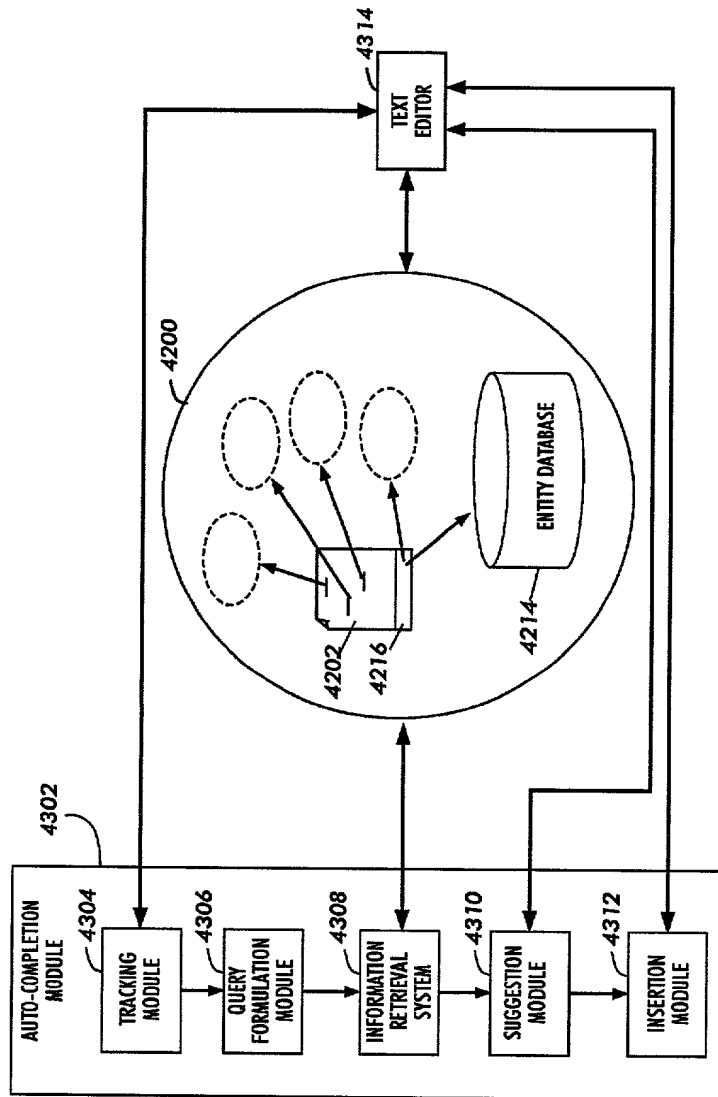


FIG. 43

44/67

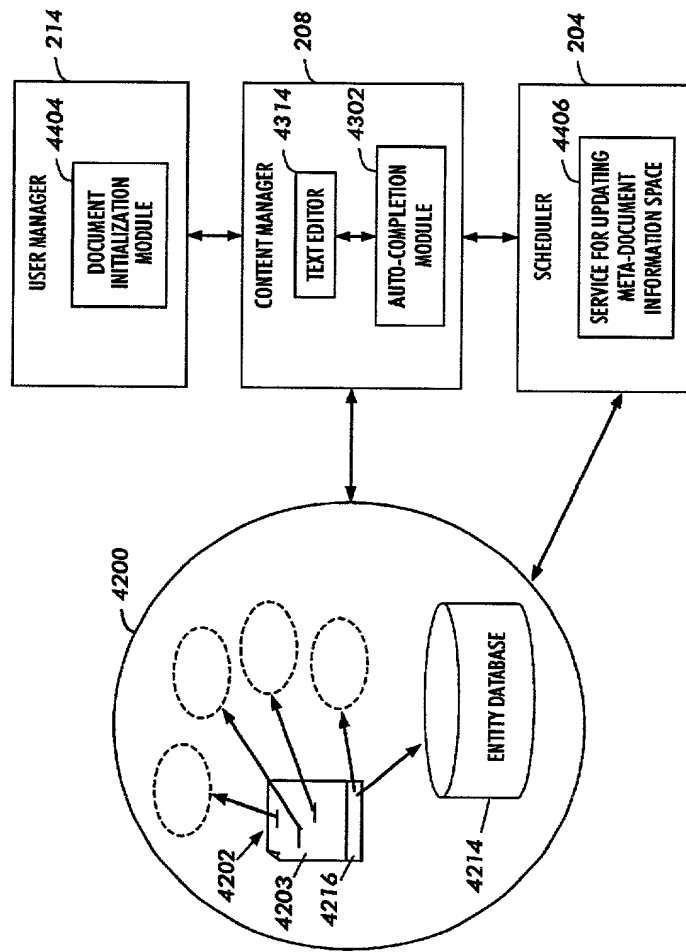


FIG. 44

45/67

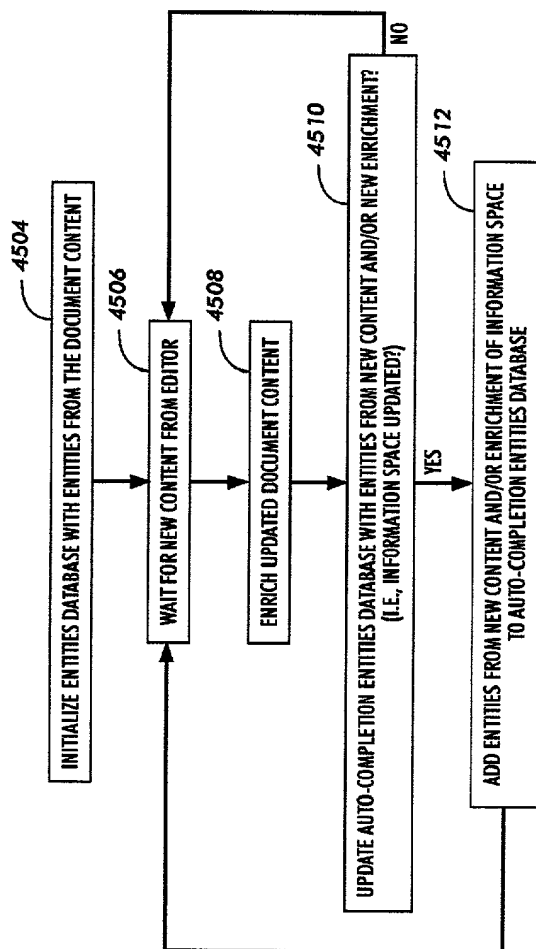


FIG. 45

46/67

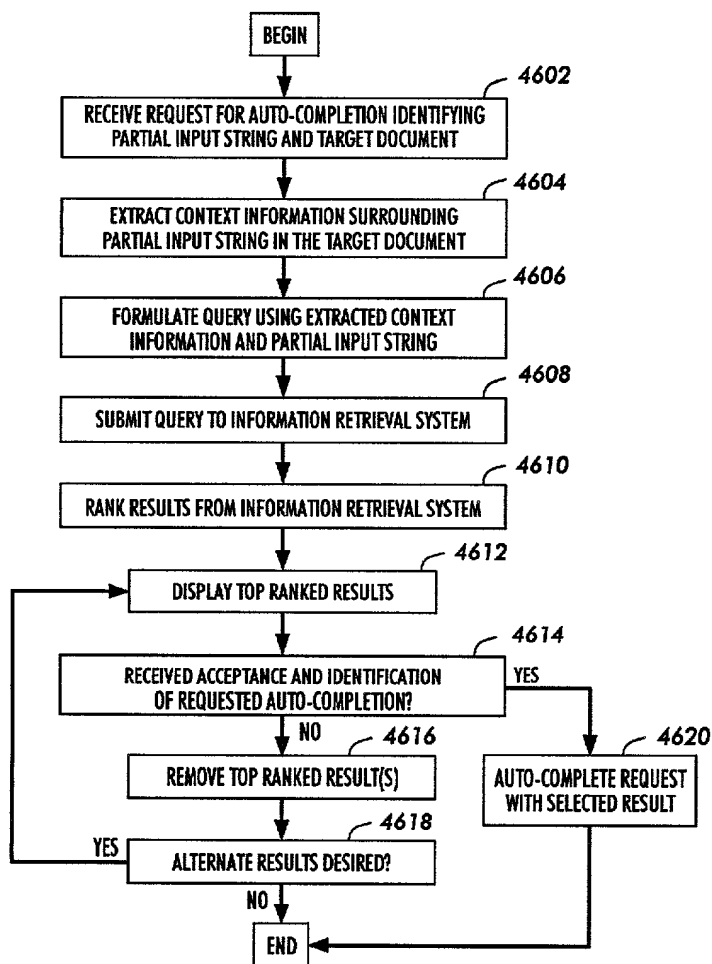
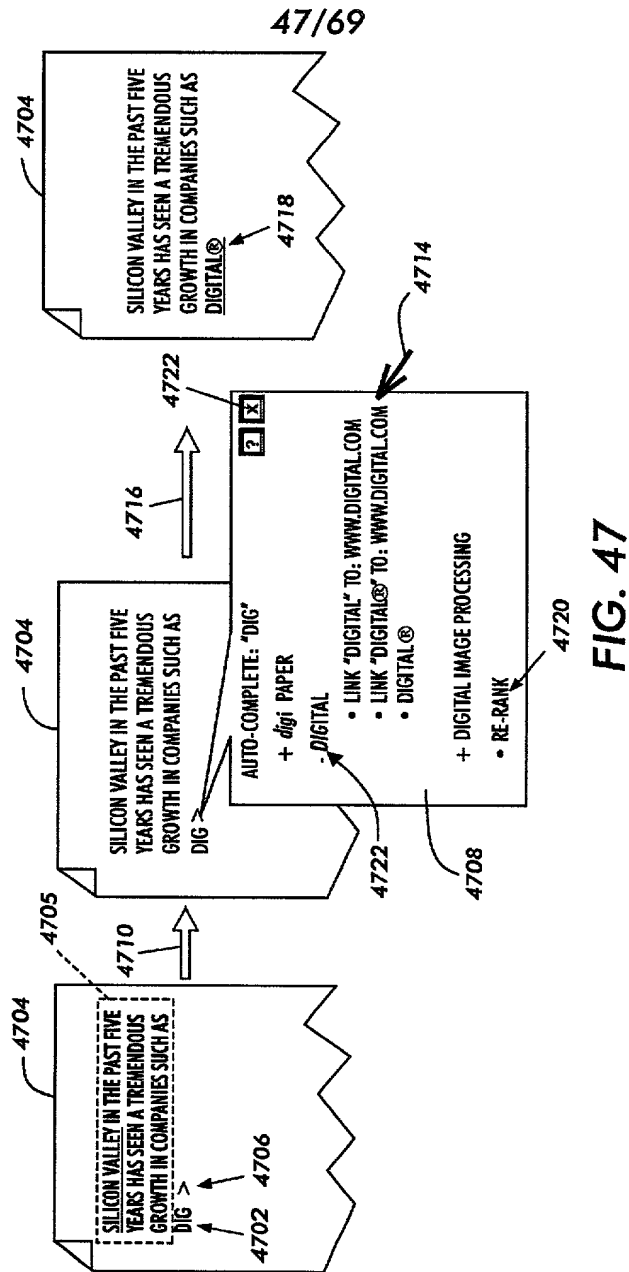


FIG. 46



48/69

(A) KEY	(B) ENTITY	(C) MARKUP	(D) FORMAT	(E) ORIGIN	(F) ORIGIN POSITION	(G) PART OF SPEECH	(H) CONTEXT
Sili	Silicon Valley	www.siliconvalley.com	Capitalize	TARGET DOCUMENT CONTENT	1	Noun	Science
Dig	Digital	www.digital.com	®	www.digital.com	434	Adjective	Science
Dig	DigitPaper	NONE	Bold	www.parc.xerox.com	23	Noun	Science
Dig	digress	NONE	NONE	www.nytimes.com	343	Verb	Politics
...	...	...	...	...	...	...	...

FIG. 48

49/69

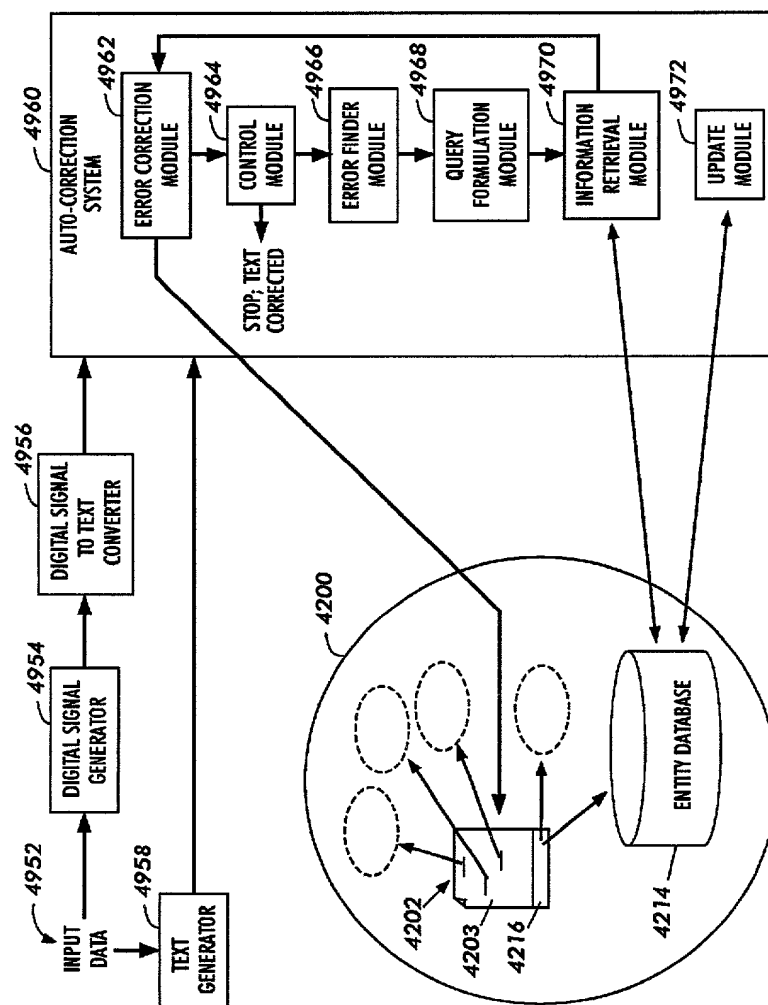


FIG. 49

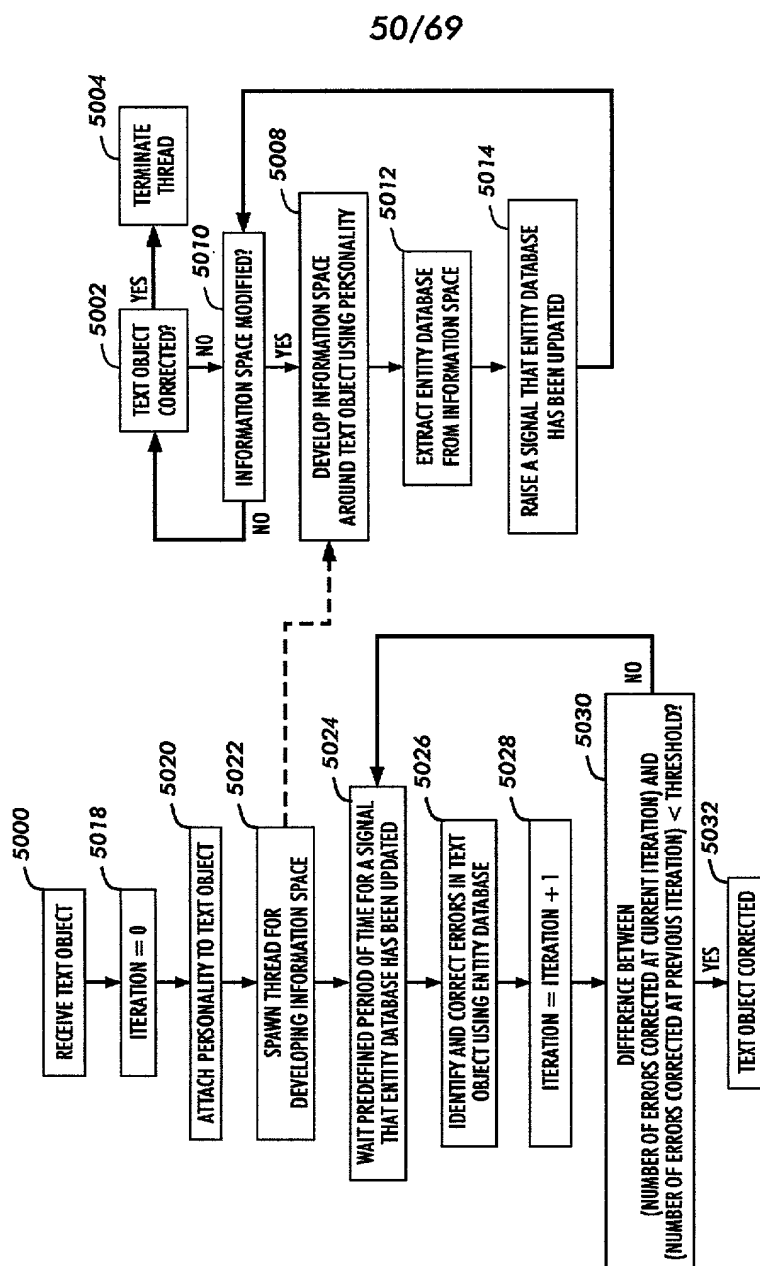


FIG. 50

51/69

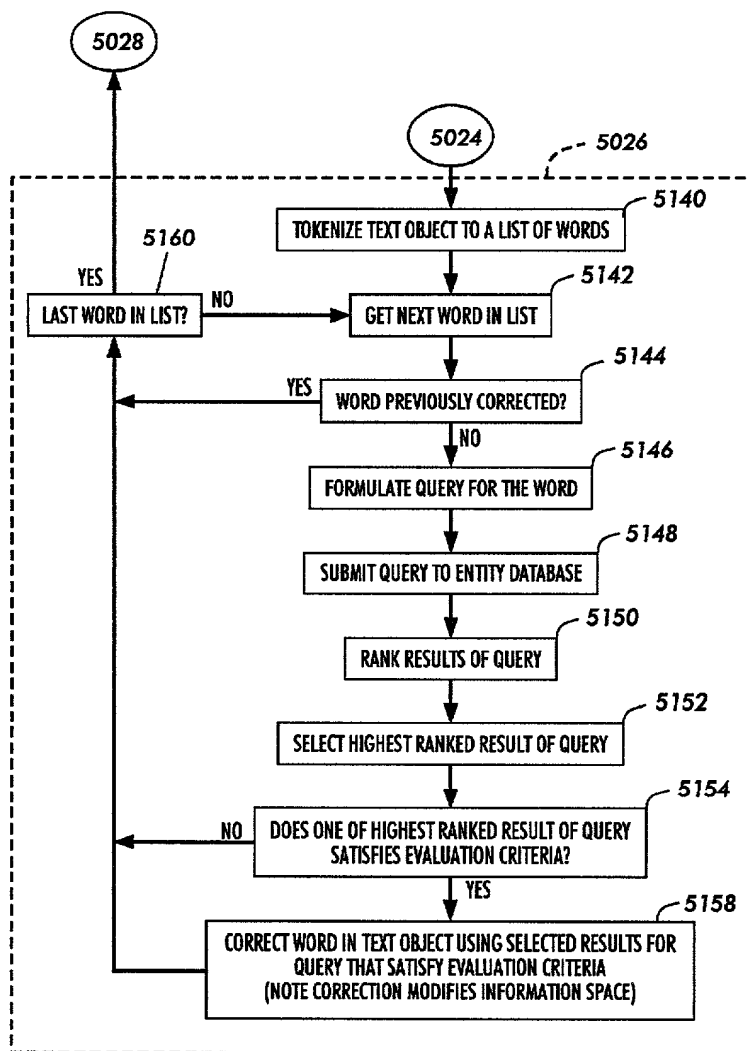


FIG. 51

52/69

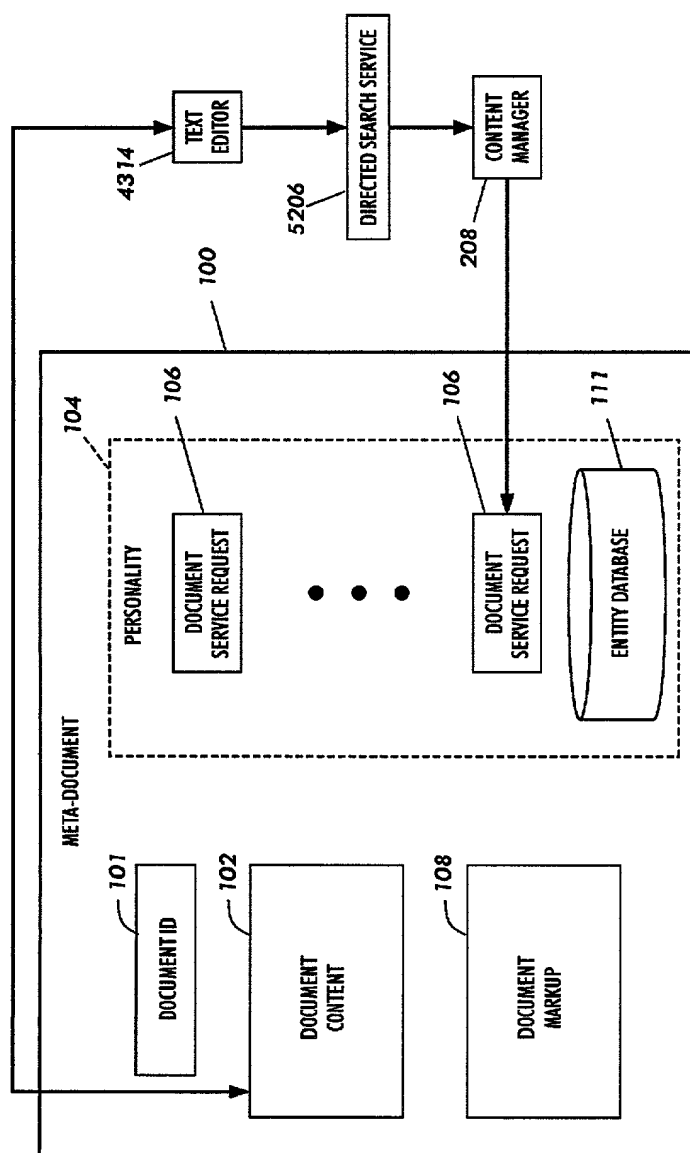


FIG. 52

53/69

5300

**DIRECTED SEARCH**

5302 Get:  For:  5304

5306 Insert Result as: ☐ Link ☒ Content ☐ Metadata

5308 Update Frequency:

5310

Select Providers:

Reuters  
Thomson  
Hoover

5312

Ensures:

Language of text is:

☒ Premium ☐ Non-Premium

☐ Low Quality ☒ High Quality

☐ Copyrighted ☒ Not Copyrighted

☐ Free ☒ Paid Max price \$:

5318 Search Selected Providers By:

5320 ☒ Cost

5322 ☐ Speed

5314

Location Of Results:

☒ After Current Selection

☐ Before Current Selection

☐ As Comment To Current Selection

☐ As Footnote To Current Selection

5315

Current Selection is:

Xerox in the past five years has seen tremendous growth

5317

5316

Cancel Insert

FIG. 53

54/69

— 5400

```
<service id='Products'
  refresh=30
  insert='Content'
  language='En'
  quality='Premium&High&Not-copyrighted&paid'
  maxprice='50'
  maxwords='2000'
  search='cost'>
  <entity>Xerox
    <offsets>13 18 456 461 710 715</offsets>
    <provider name='Thomson' id=18></provider>
    <provider name='Reuters' id=19></provider>
  </entity>
</service>
```

FIG. 54

55/69

5500

**IMPORT/EXPORT** [?] [X]

EXPORT NAME:   5502

**EXPORT:**

- ☒ ORIGINAL DOCUMENT CONTENT
- ☒ DOCUMENT MARKUP (I.E., ENRICHMENT)
- ☒ PERSONALITIES

5504

5506

5508

☐ IMPORT NAME:   5512

**IMPORT:**

- ☒ ALL CONTENT
- ☐ SELECTED CONTENT ONLY
  - ☐ ORIGINAL DOCUMENT CONTENT
  - ☐ DOCUMENT MARKUP (I.E., ENRICHMENT)
  - ☐ PERSONALITIES

5510

- ☒ BIND UN-MATCHED ELEMENTS
- ☒ ENHANCE BOUND ELEMENTS WITH EXISTING SERVICE PROVIDERS

5514

FIG. 55

56/69

```

<!-- SERVER ID>
<docsouls:serverid> DS v1.0 server name </docsouls:serverid>
<!-- PROPERTIES OF DOCUMENT>
  <docsouls:docid> xxx </docsouls:docid>
  <docsouls:name> xxx </docsouls:name>
  <docsouls:owner> xxx </docsouls:owner>
...
<!-- ORIGINAL DOCUMENTS DOCUMENT CONTENT>
<docsouls:originaldoc format="HTML">toto.html</docsouls:originaldoc>
<docsouls:browsingdoc format="HTML">browse.html</docsouls:browsingdoc>

<!-- LIST OF PERSONALITIES AND DOCUMENT SERVICE REQUESTS>
<docsouls:endowmentdescription>
  <!-- LIST OF PERSONALITIES>
    <docsouls:personality id = " " name=" " etc.>
    <docsouls:service id=" " name=" " etc.>
      <docsouls:provider name=" " etc.>
      <docsouls:provider name=" " etc.>
    </docsouls:service>
  </docsouls:personality>
  ...
  <!-- LIST OF SERVICE REQUESTS>
    <docsouls:service id=" " name=" " etc.>
    <docsouls:provider name=" " etc.>
    <docsouls:provider name=" " etc.>
  </docsouls:service>
  ...
</docsouls:endowmentdescription>

```

FIG. 56

57/69

```

<!-- DESCRIPTIONS OF PERSONALITIES >
<docsouls:personalitydescription>
  <docsouls:id> xx </docsouls:id>
  <!-- all the fields AND service categories>
  <docsouls:servicecategory id="" name = "">
</docsouls:personalitydescription>

<!-- NEXT PERSONALITY DESCRIPTION >
...

<!-- DESCRIPTION OF DOCUMENT SERVICE REQUESTS >
<docsouls:servicedescription>
  <docsouls:id> xx </docsouls:id>
  <!-- list all fields (e.g., "refresh period", category, etc.)>
  <!-- list all providers>
  <docsouls:provider id="" name = "">
  <!-- list all strategies>
  <!-- list status of services (original, frozen, mapped, etc.)>
  <docsouls:servicestatus status="mapped" originalid="" originalserver="">
  <!-- list ServerId if the service was not available on current server>
  <docsouls:serverid>id</docsouls:serverid>
</docsouls:servicedescription>

<!-- NEXT SERVICE REQUESTS DESCRIPTION >
...

```

FIG. 57

58/69

```

<!-- DESCRIPTION OF PROVIDERS >
<docsouls:providerdescription>
  <docsouls:id> xx </docsouls:id>
  <!-- all the fields e.g. key, URL, etc.>
</docsouls:providerdescription >

<!-- DESCRIPTION OF DICTIONARIES >
<docsouls:dictionarydescription>
  <docsouls:id> xx </docsouls:id>
  <!-- all the fields, e.g. category>
</docsouls:dictionarydescription>

<!-- DESCRIPTION OF STRATEGY >
<docsouls:strategydescription>
  <docsouls:id> xx </docsouls:id>
  <!--all the fields>
  <!--all the dictionaries>
</docsouls:strategydescription>

<!-- RESULTS OF GLOBAL SERVICES >
<docsouls:globalservice id="Summary">
  <docsouls:link> xxx </docsouls:link>
  <docsouls:content> xxx </docsouls:content>
</docsouls:globalservice>

<!-- OTHER RESULTS (E.G. KEYWORDS, CATEGORIES, ETC.) >

```

FIG. 58A

59/69

```

<!-- (OPTIONAL) DESCRIPTION OF ENRICHMENT PERFORMED AT OTHER DOCUMENT ENRICHMENT
SYSTEMS>
<docsouls:serverid>olderServerid</docsouls:serverid>
<docsouls:personalitydescription>...</docsouls:personalitydescription>
<docsouls:serviceid>...</docsouls:serviceid>

<!-- (OPTIONAL) LIST OF RESULTS OF THE LAST ENRICHMENT>
<!-- IDENTIFY DOCUMENT SECTION IN CASE OF MULTI-PART DOC>
<docsouls:docpart>main_frame.html</docsouls:docpart>
<!-- OFFSET WHEN ENRICHMENT APPLIES TO A SECTION>
<docsouls:offset> 0 200 </docsouls:offset>
<!-- STATUS OF SERVICE APPLIED ("ACTIVE" OR "FROZEN")>
<docsouls:service id="StockQuote" status="active">
<!-- ENTITY>
<docsouls:entity>Xerox
<!-- NORMALIZED FORM>
<docsouls:normform>Xerox</docsouls:normform>
<!-- LIST OF OFFSETS WHERE ENTITY IS FOUND IN TEXT RELATIVE TO SECTION>
<docsouls:offsets start=35 end=40 />
<docsouls:offsets start=232 end=237 />
<!-- DICTIONARIES>
<docsouls:dict> xxx </docsouls:dict>
<!-- STRATEGIES>
<docsouls:strat> xxx </docsouls:strat>
<!-- LINK INFORMATION>
<docsouls:link> xxx </docsouls:link>
<!-- CONTENT INFORMATION>
<docsouls:content> xxx </docsouls:content>
</docsouls:entity>
<!-- NEXT ENTITY>
...
</docsouls:service>

```

FIG. 58B

60/69

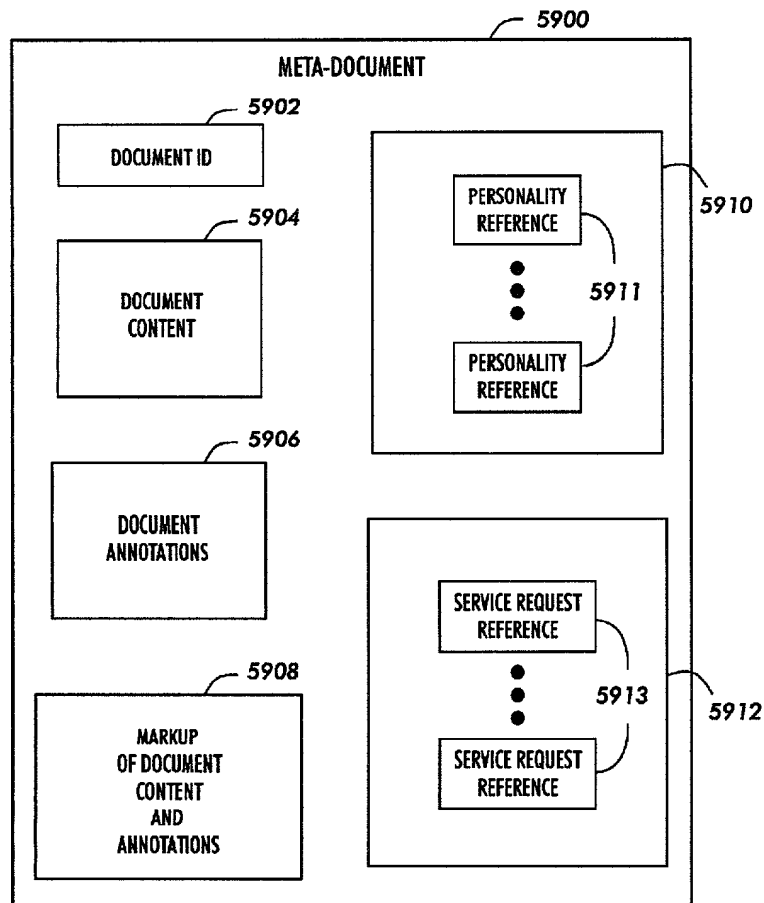


FIG. 59

61/69

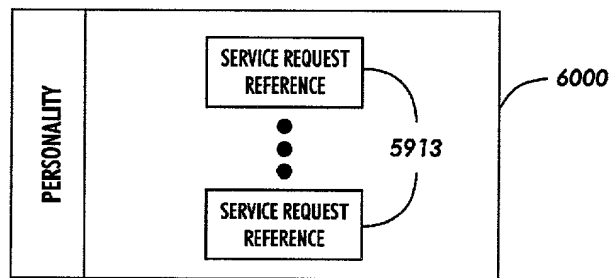


FIG. 60

62/69

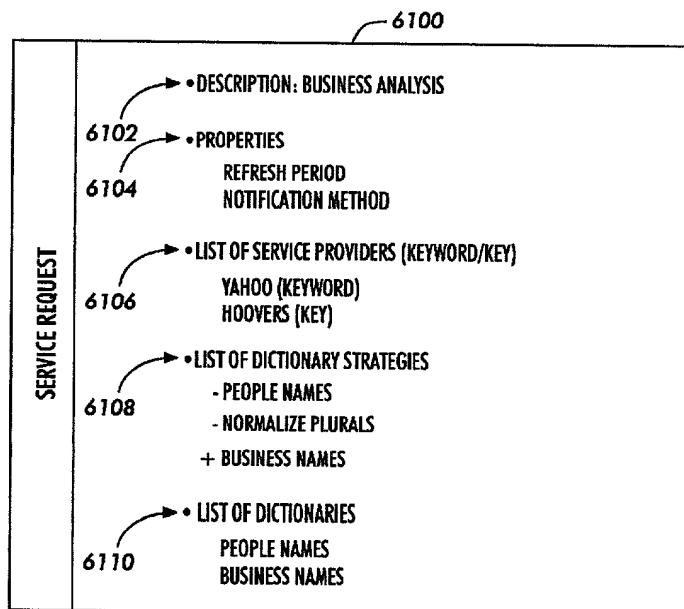


FIG. 61

63/69

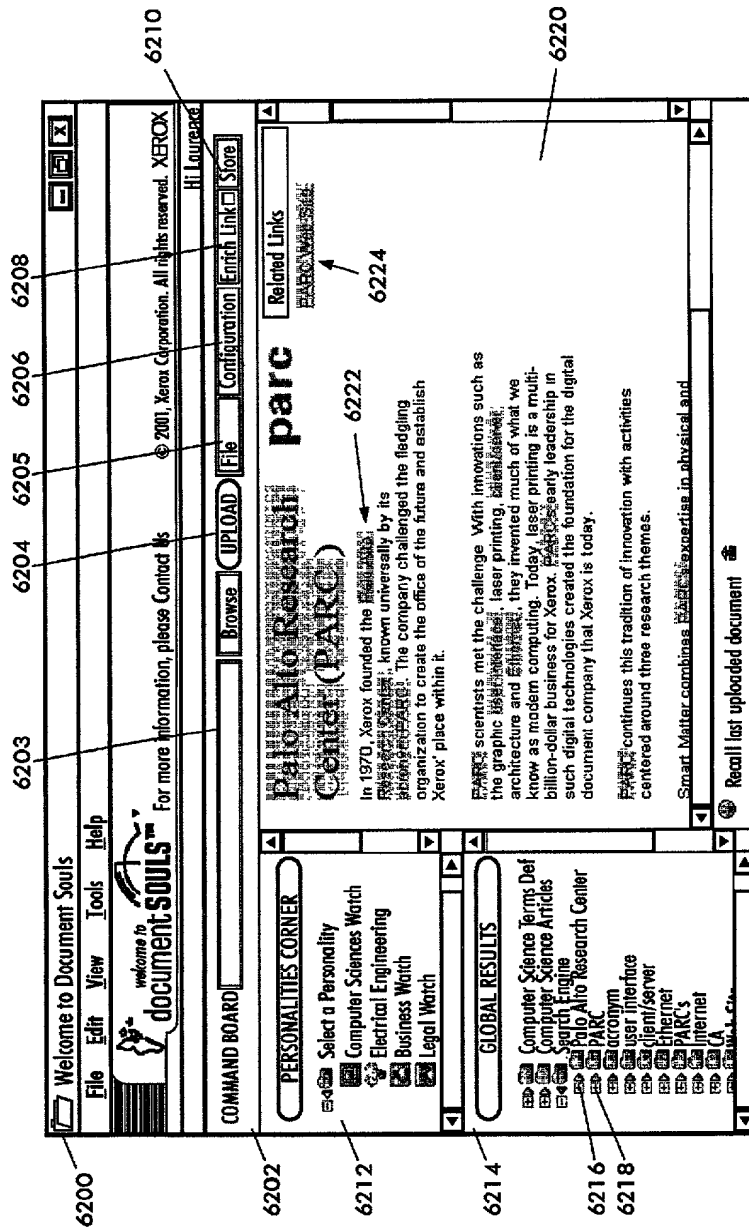


FIG. 62

64/69

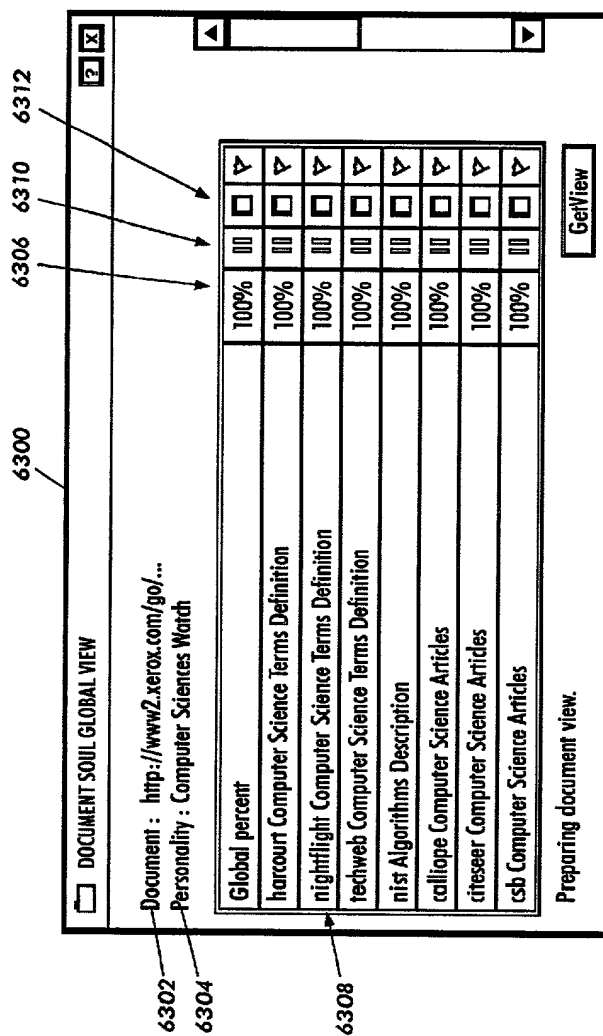


FIG. 63

65/69

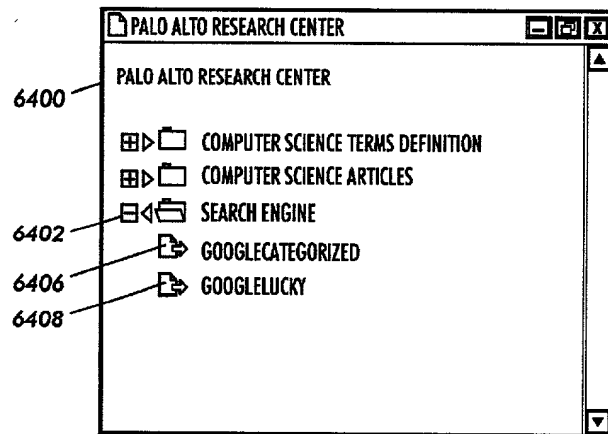


FIG. 64

66/69

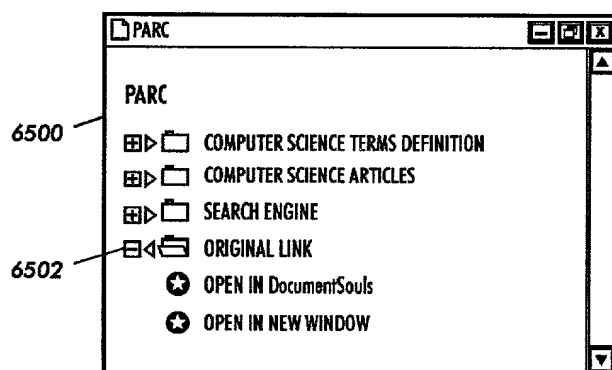


FIG. 65

67/69

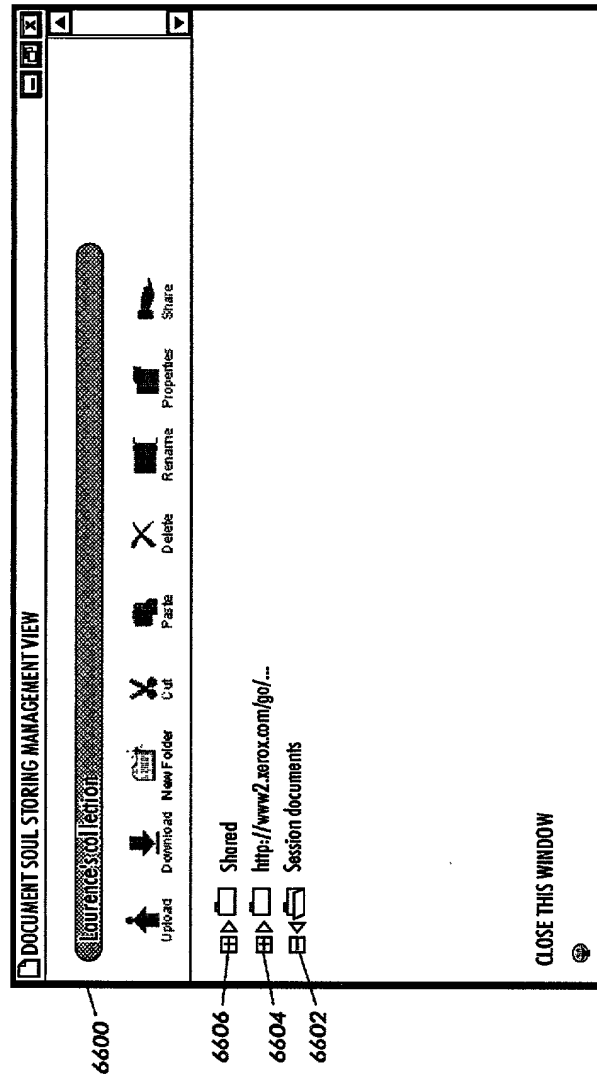


FIG. 66

68/69

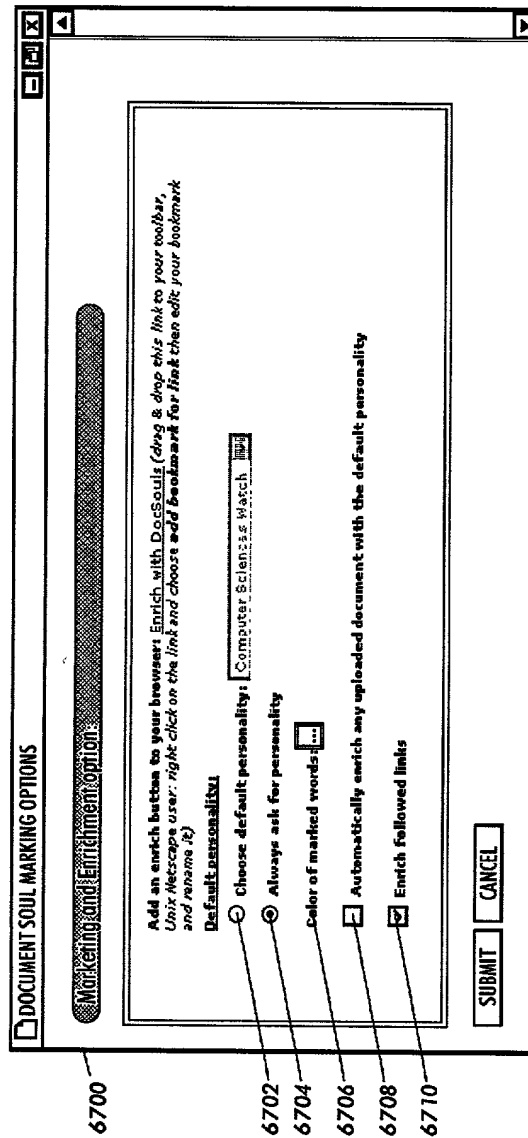


FIG. 67

69/69

[illegible]

**FIG. 68**